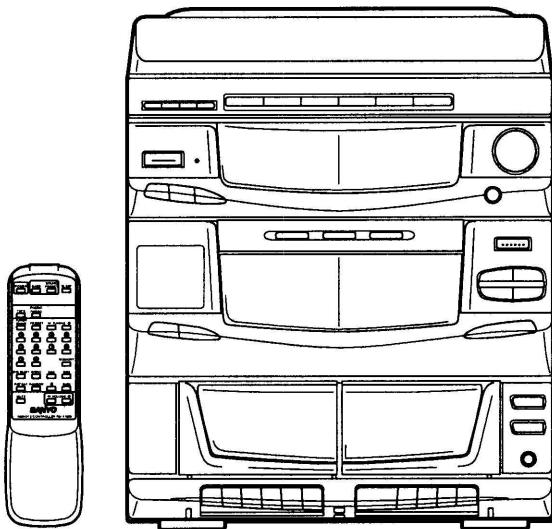


Service Manual**Digital Stereo Sound
System****DC-X1050 (UK)****PRODUCT CODE No.
129 511 00****CONTENTS**

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SPECIFICATIONS

TURNTABLE SECTION

Type Belt drive auto-return
Rated speed 33 1/3, 45rpm

TUNER SECTION

Reception frequency FM : 87.5 - 108 MHz
MW : 522 - 1,611 kHz
LW : 144- 285 kHz

CD PLAYER SECTION

Type Changer, 3-disc
Channels 2-channel stereo
Sampling frequency ... 44.1 kHz
Pick-up Optical 3-beam semiconductor laser
Laser output 0.6 mW (Continuous wave max.)
Wave length 790 nm
Frequency response ... 20 Hz - 20,000 Hz
Wow & Flutter Below measurable limits

CASSETTE DECK SECTION

Track system 4-track, 2-channels stereo
Frequency response 60 Hz - 14,500 Hz (CrO₂ tape)
60 Hz - 13,500 Hz (Normal tape)
Signal-to-noise ratio 60 dB (Dolby NR ON)
Wow & Flutter 0.15 % (WRMS)
Fast forward /
rewind time Approx. 110 sec. (C-60)

GENERAL

Output power 22.5 W x 2 (at 4 ohms,
10 % distortion)
Sound preset Four electronic presets
Inputs VIDEO : 400 mV / 50k ohms
Outputs SPEAKERS : 4 ohms
PHONES : 8 - 32 ohms
Power requirements AC : 230 V, 50 Hz
Power consumption 80 W
Dimensions 350 (W) x 423 (H) x 375 (D) mm
Weight 9.6 kg

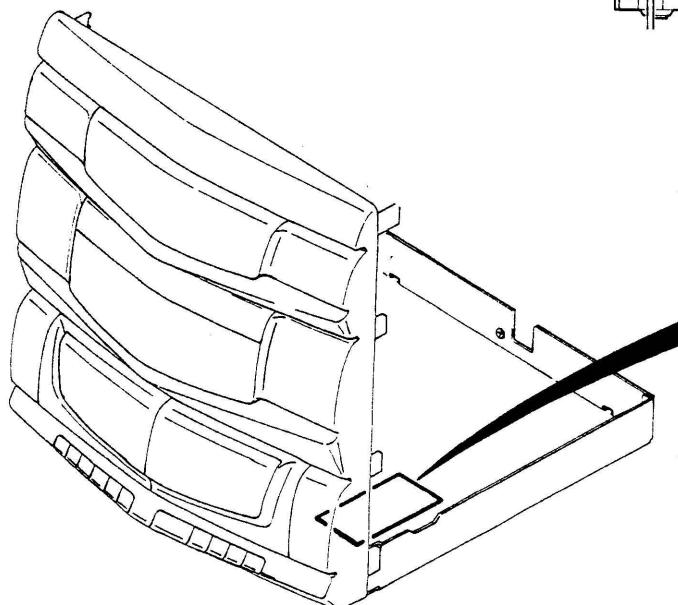
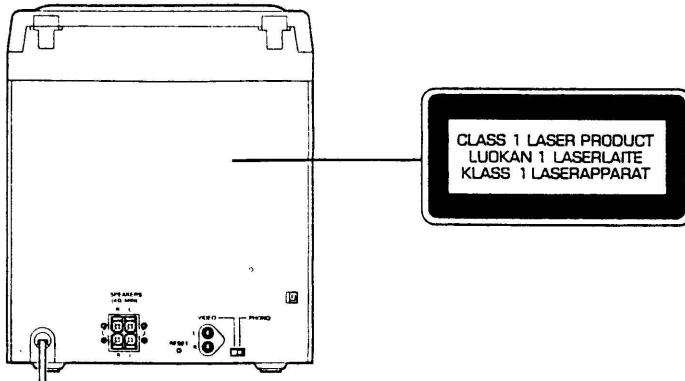
Specifications subject to change without notice.

LASER BEAM SAFETY PRECAUTIONS

- Pick-up that emits a laser beam is used in this CD player.

CAUTION :
USE OF CONTROLS OR ADJUSTMENTS
OR PERFORMANCE OF PROCEDURES
OTHER THAN THOSE SPECIFIED
HEREIN MAY RESULT IN HAZARDOUS
RADIATION EXPOSURE

LASER OUTPUT 0.6 mW Max. (CW)
WAVELENGTH 790 nm



CAUTION—INVISIBLE LASER RADIATION
WHEN OPEN AND INTERLOCKS DEFECTED.
AVOID EXPOSURE TO BEAM.

ADVARSEL—USYNLIG LASER STRÅLING VED ÅBNING.
NAR SIKKERHEDSAFTRYDERE ER UDE AF FUNKTION,
UNDGA UDSÆTTELSE FOR STRÅLING.

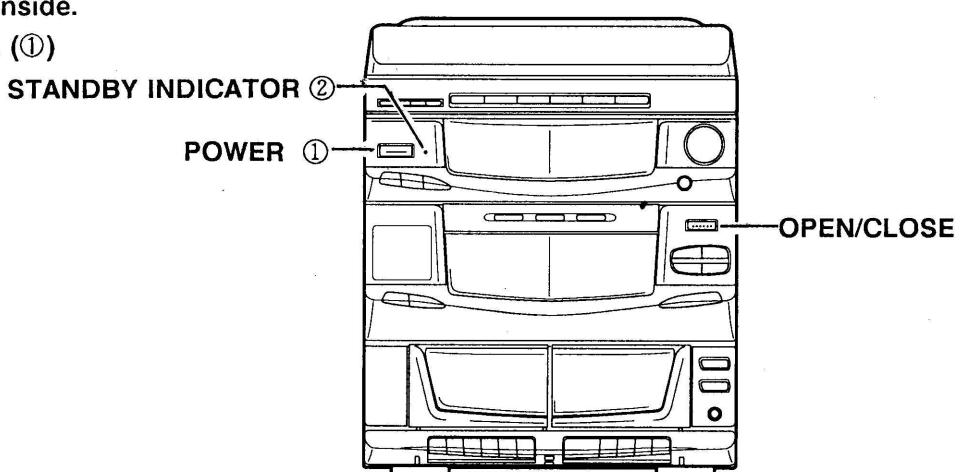
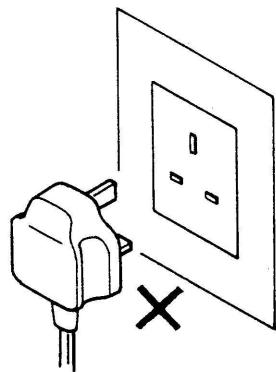
VARNING—OSYNLIG LASER STRÅLING NÄR
DENNA DEL ÄR ÖPPNAD OCH SPARR ÄR URKOPPLAD.
STRÅLEN ÄR FARLIG.

VORSICHT—UNSICHTBARE LASERSTRÄHLUNG TRITT AUF,
WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERriegELUNG
ÜBERBRÜCKT IST. NICHT DEM STRAHL AUSSETZEN.

VARO! Avattaessa ja suojailevissa ohiuttaessa olet aittina
näkymättömälle lasersäteilylle. Älä katso näheeseen.

BEFORE USE OR TRANSPORTATION

- (1) When carrying the unit, be sure to remove any discs which may be inside.
- (2) Press the POWER "OFF". (①)



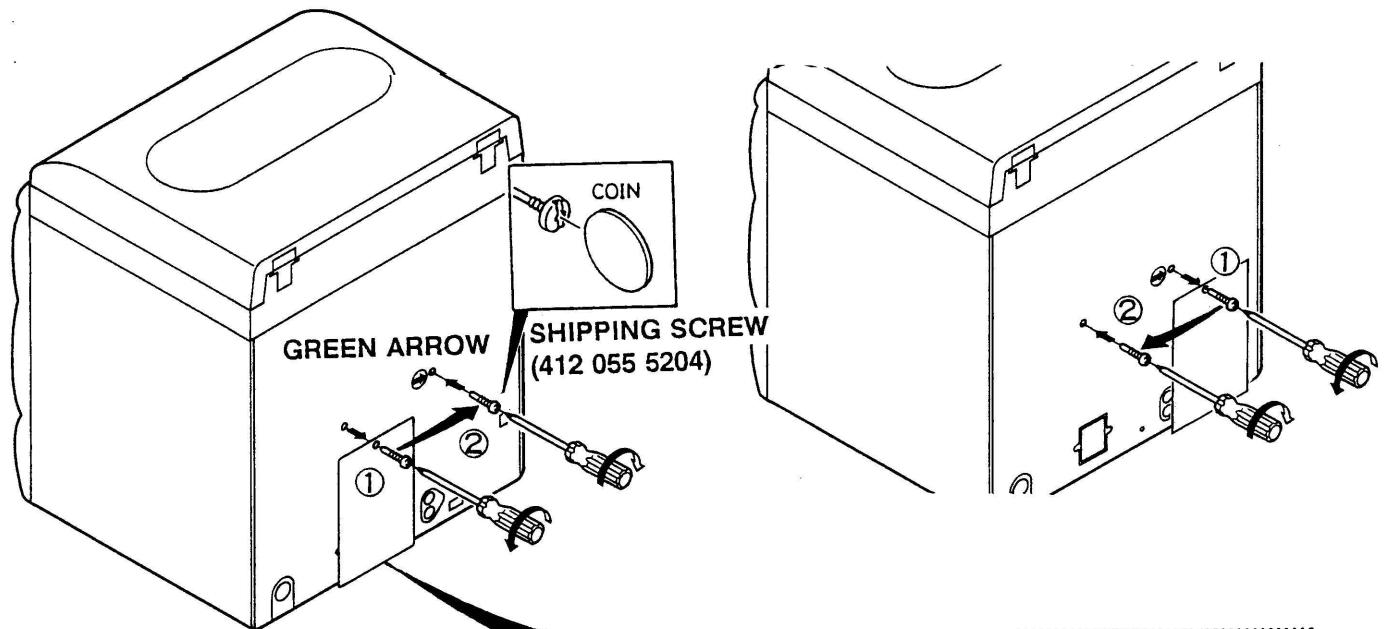
- (3) CD mechanism : Moving start
- (4) CD mechanism : Home position
- (5) The STANDBY indicator "lights". (②)
- (6) Then unplug the power cord from the AC outlet.

• Before use

- (1) Remove the shipping screw from the rear of the unit. (①)
- (2) This screw is used to secure the CD mechanism during shipment and should be retained for the future use. (②)

• Before transportation

- (1) Turn on the power and remove all discs from the unit. (①)
- (2) Turn the POWER OFF. (②)
The STANDBY indicator lights.
- (3) Then unplug the power cord from the AC outlet.
- (4) Reinstall the shipping screw.



CAUTION LABEL
(614 286 4159)

• IMPORTANT!

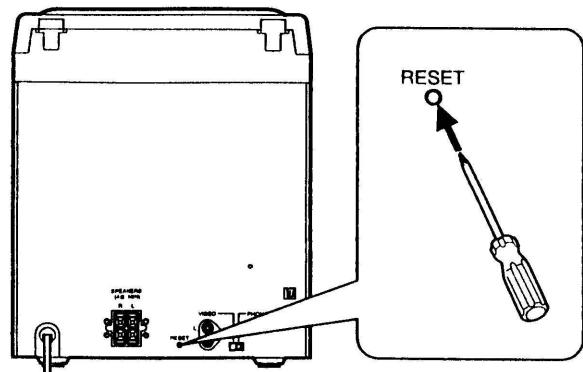
Before use remove this shipping screw.

The removed screw should be retained by reinstalling the screw to the point indicated green arrow.

WHAT TO DO IF

If the operation of the unit or display is not normal, or you wish to clear the contents of the memory.

1. Disconnect the power cord's plug from the electrical outlet.
2. Press the **RESET** button for at least 20 seconds.
3. Connect the power cord.
4. Press the **POWER** button to turn the power on.

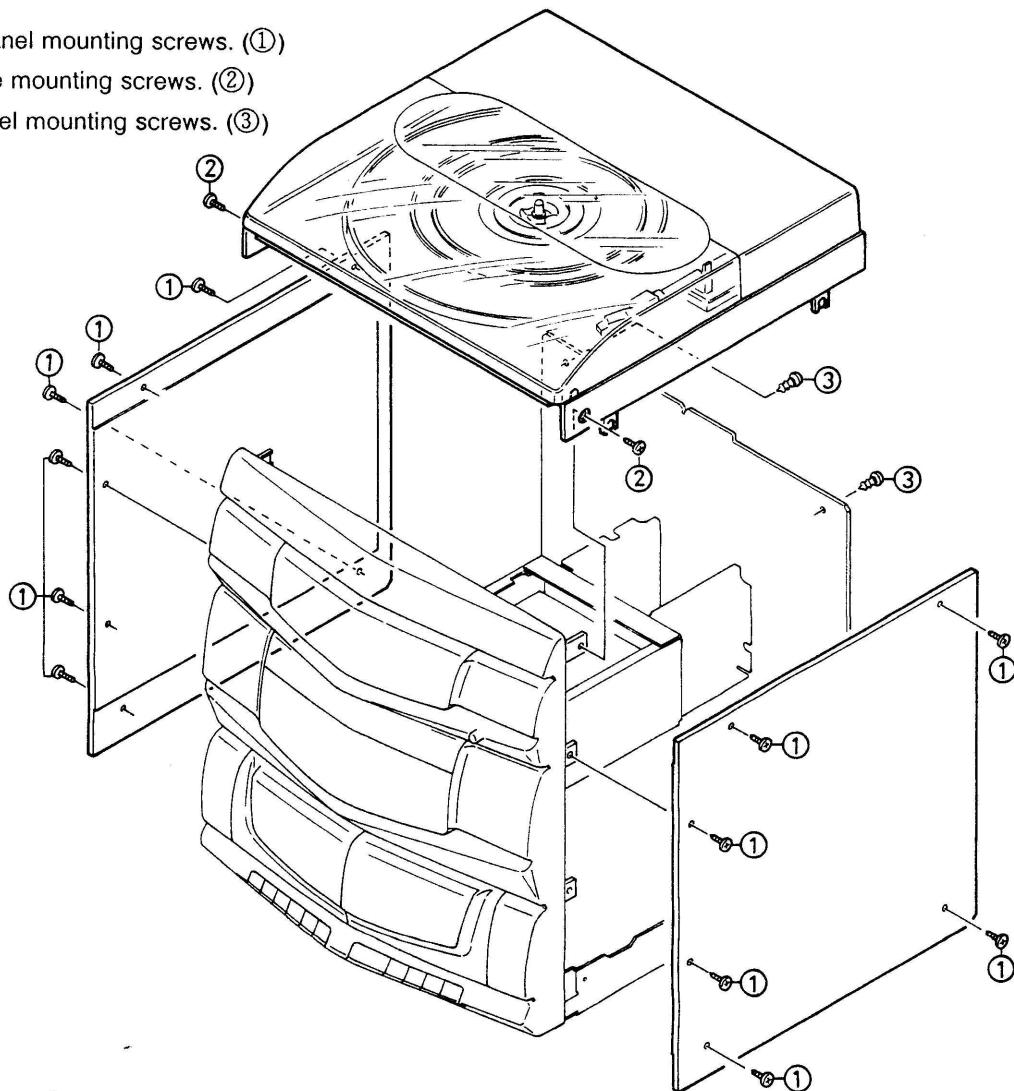


REMOVAL AND INSTALLATION

- Press the "POWER" button and check that the STANDBY LED lights.
- Disconnect the power cord's plug from the electrical outlet.
- All wiring should be returned to the original position after work is completed:
- First have ready many the new FIXERS (614 129 2496) for replacement.
- Arrange the lead wires so that they are not near the heat sink.

a. CABINET

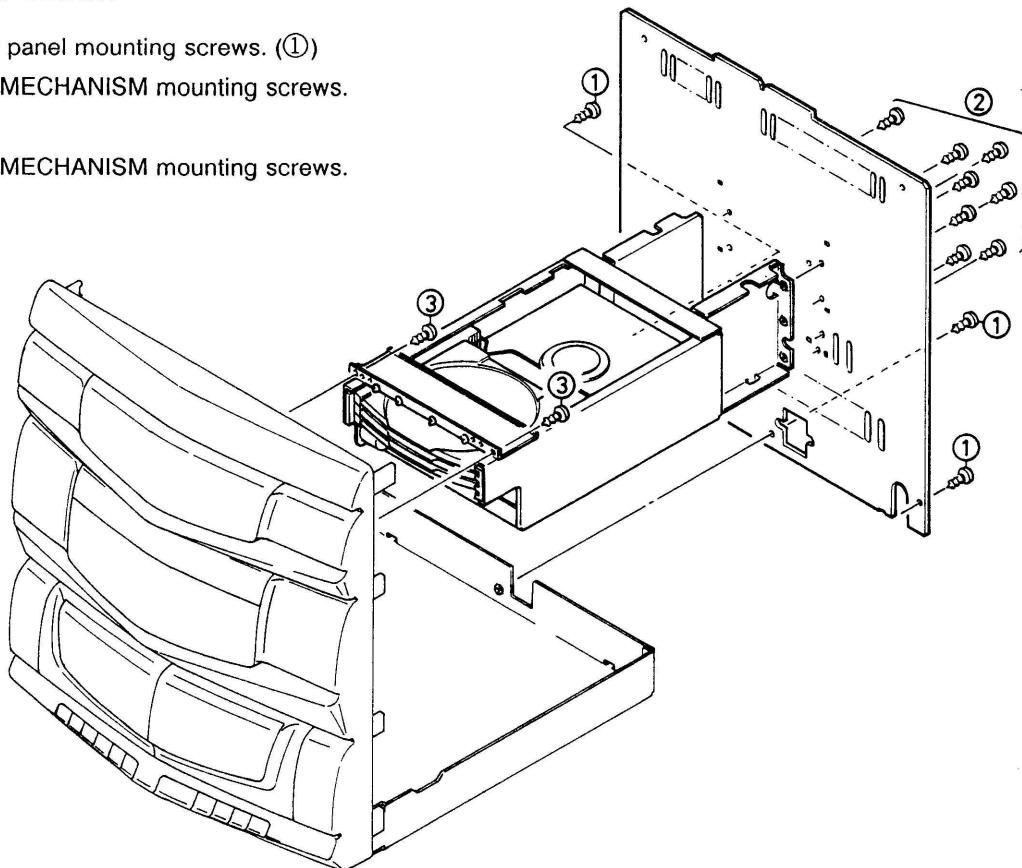
- (1) Remove the 12 side panel mounting screws. (①)
- (2) Remove the 2 turntable mounting screws. (②)
- (3) Remove the 2 rear panel mounting screws. (③)



REMOVAL AND INSTALLATION

b. CD MECHANISM BLOCK

- (1) Remove the 3 rear panel mounting screws. (①)
- (2) Remove the 8 CD MECHANISM mounting screws. (②)
- (3) Remove the 2 CD MECHANISM mounting screws. (③)

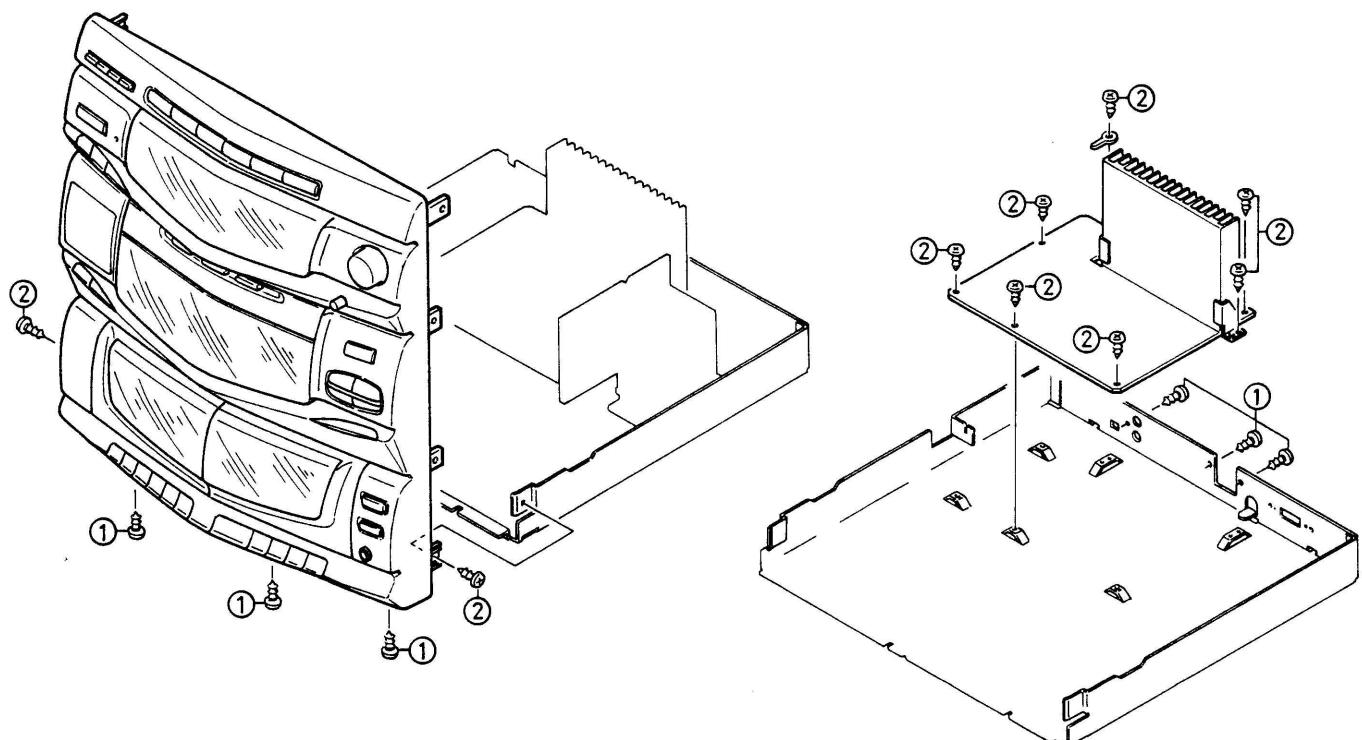


c. FRONT PANEL

- (1) Remove the 3 bottom cabinet mounting screws. (①)
- (2) Remove the front panel mounting screws. (②)

d. AMP. P.W.BOARD

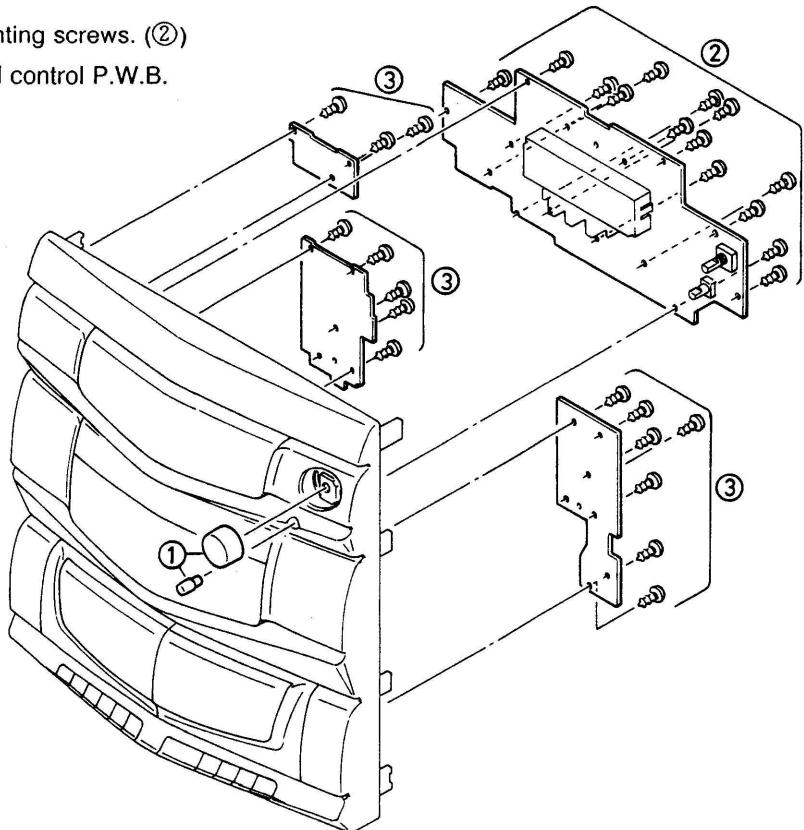
- (1) Remove the 3 socket mounting screws. (①)
- (2) Remove the 7 AMP. P.W.Board mounting screws. (②)



REMOVAL AND INSTALLATION

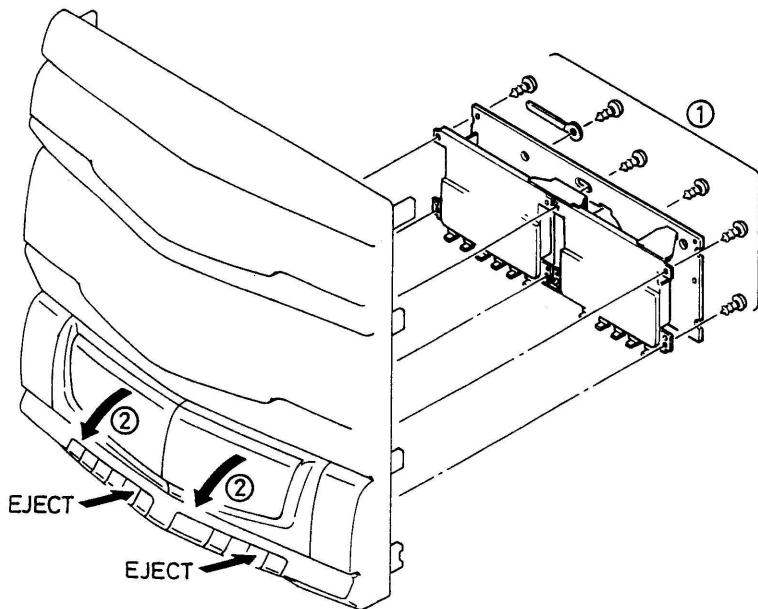
e. FRONT AND ETC. P.W.BOARDS

- (1) Remove the VOLUME and BALANCE control knobs.
(①)
- (2) Remove the FRONT P.W.B. mounting screws. (②)
- (3) Remove the FRONT OPERATION control P.W.B.
mounting screws. (③)



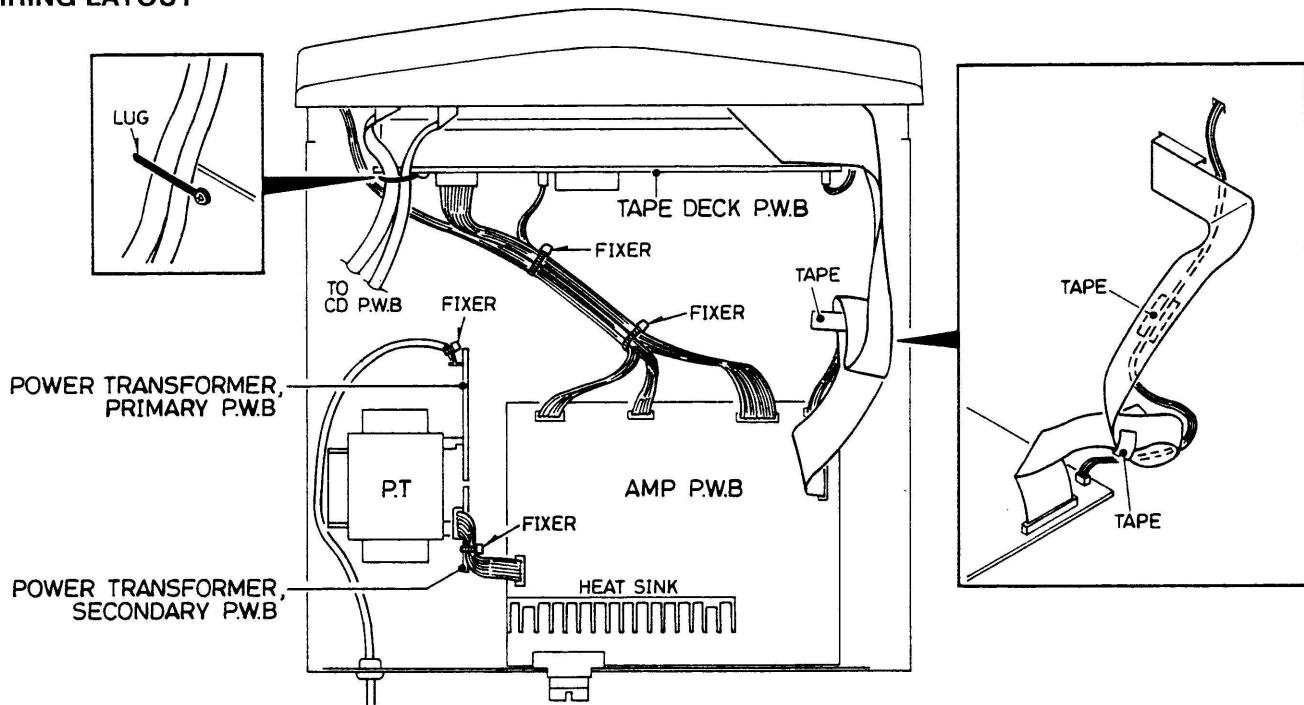
f. TAPE MECHANISM

- (1) Remove the TAPE MECHANISM mounting screws.
(①)
- (2) Press the EJECT buttons.
- (3) Open the cassette lids. (②)



REMOVAL AND INSTALLATION

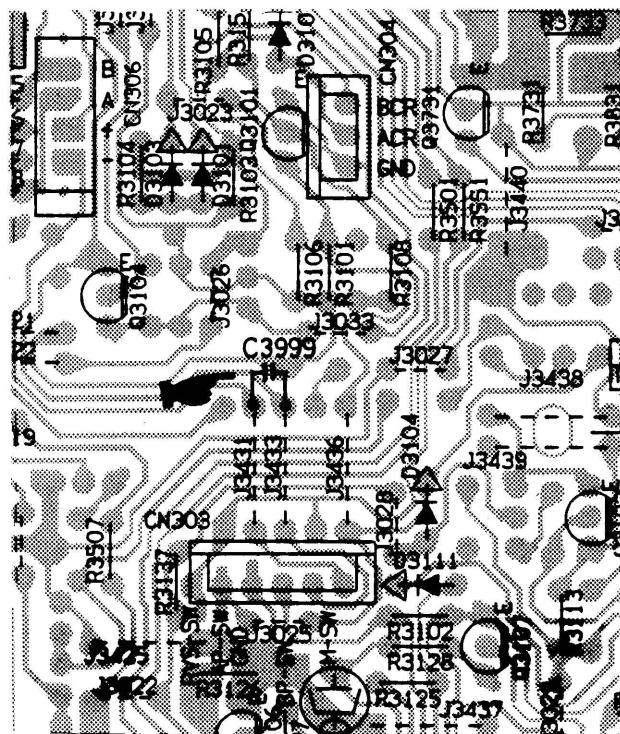
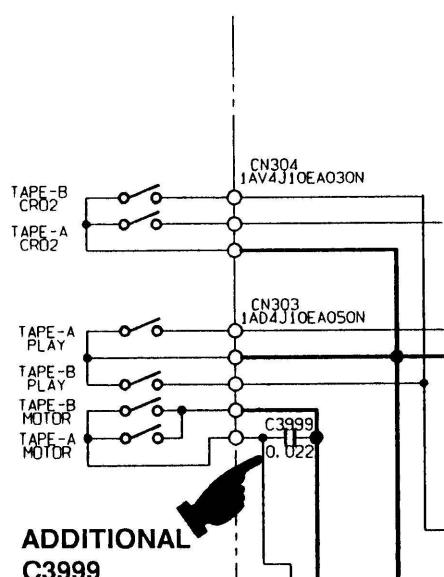
g. WIRING LAYOUT



NOTES

REGARDING THE TAPE DECK'S AUTO-STOP FUNCTION

- When the tape is REW, the auto-stop function causes tape transport to stop at the end of the tape. At this point, a malfunction may occur with the FUNCTION control (if it is in a position other than VIDEO). Should this occur, add a capacitor as shown in the diagram.
(C3999 : Ceramic 0.022 μ F, 50V or 0.022 μ F, 25V)
Part No. (403 072 2703 or 403 003 2802)



TAPE DECK ADJUSTMENTS

a. PREPARATIONS FOR ADJUSTMENTS

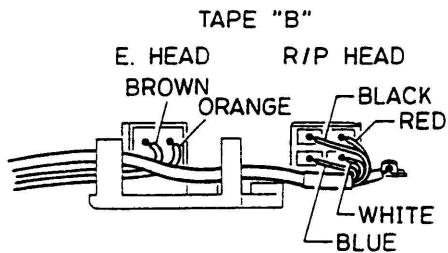
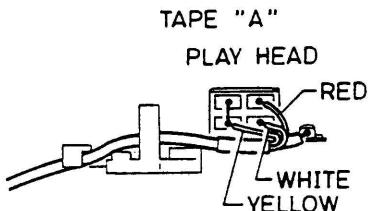
• Measuring instruments, tools.

- (1) Test tape MTT-114M (10 kHz)
TCW-211 (1,500 Hz) (Optional)
MTT-111 (3,000 Hz)
AC-224 (NORMAL)
- (2) Oscilloscope : (At least 10 MHz, dual channel)
- (3) Digital voltmeter (Input impedance 1 MΩ or more)
- (4) Automatic distortion analyzer or AC voltmeter
(- 80dB, input impedance 1MΩ or more)
- (5) AF-oscillator (400 Hz, 500 mV RMS)
- (6) Frequency counter (5 MHz or more)
- (7) Frequency counter, probe.
- (8) Screwdrivers (non-metallic) for adjustments.

b. HEAD REPLACEMENT AND AZIMUTH ADJUSTMENT

(a) Head replacement

- (1) After replacement, demagnetize the heads by using a degausser.
- (2) Be sure to clean the heads before attempting to make any adjustments.
- (3) Be sure both channels (1 and 2) are the same level (Using a dual-channel oscilloscope).
- (4) All wiring should be returned to the original position after work is completed.



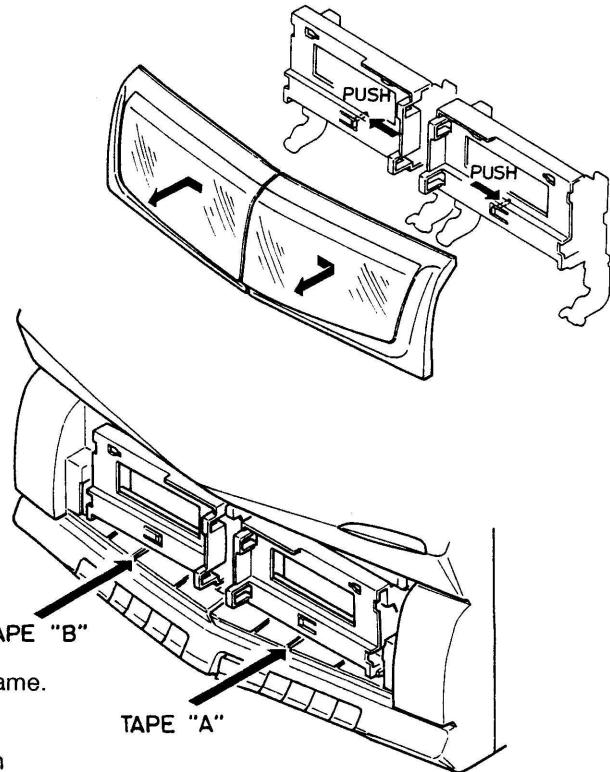
c. TAPE "A" & "B" HEAD AZIMUTH ADJUSTMENT

(a) Head adjustment

- (1) Load a test tape in Tape Deck "A" (MTT-114N, etc.: 10 kHz) for azimuth adjustment.
- (2) Press the PLAY (►) button.
- (3) Use a flat-tip (-) screwdriver to turn the screw for azimuth adjustment so that the left and right outputs are maximized at the same phase during playback.
- (4) Press the STOP button.
- (5) Repeat procedure for Tape Deck "B".
- (6) After completion of the adjustment, use threadlock (TB1401B) to secure the azimuth-adjustment screws.

(b) Phase alignment

- (1) Prepare a dual-channel oscilloscope.
- (2) Set so that the left and right ranges of the oscilloscope are the same.
- (3) Play the test tape (MTT-114N, etc.: 10 kHz).
- (4) Adjust so that the waveforms for the left and right channels are in alignment, as shown in the illustration.

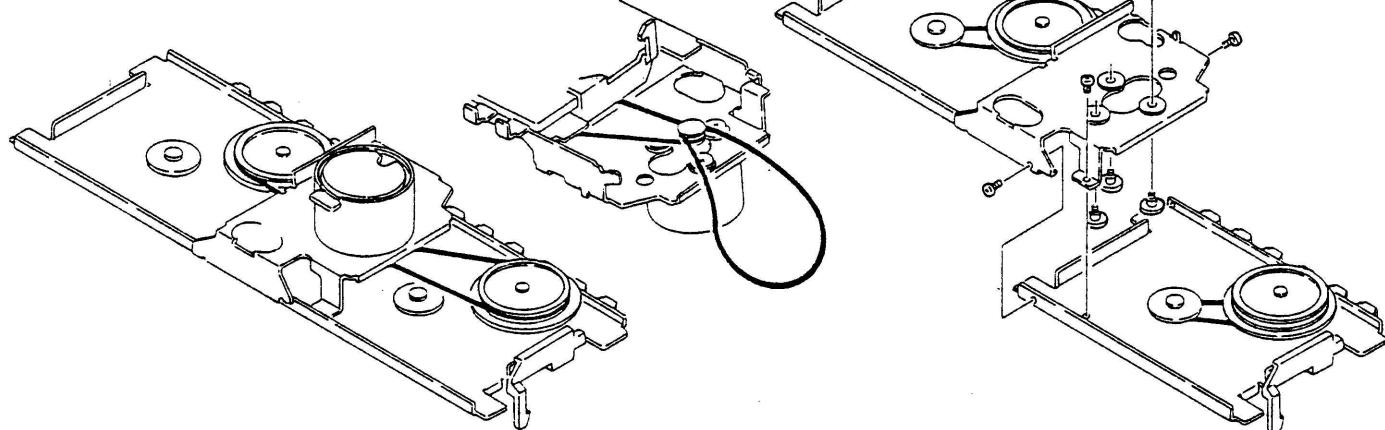


TAPE DECK ADJUSTMENTS

d. MOTOR REPLACEMENT AND SPEED ADJUSTMENT

(a) Motor replacement

- (1) See illustration.

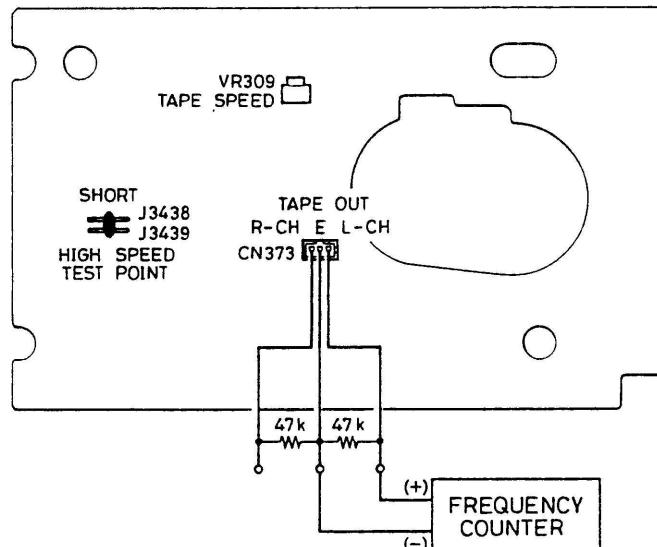


(b) Motor speed adjustments

- Make the adjustment near where the test tape finishes winding.

(c) Normal speed

- (1) Insert the test tape (MTT-111, etc. 3,000 Hz) into Tape Deck A.
- (2) Press Tape Deck A's PLAY button.
- (3) Adjust VR309 so that the frequency counter shows a reading of 3,000Hz.
- (4) Press Tape Deck A's STOP button.
- (5) Insert the test tape into Tape Deck B.
- (6) Press Tape Deck B's PLAY button.
Checking the frequency counter shows a reading of 3,000 Hz (- 40, + 40 Hz).
- (7) Press Tape Deck B's STOP button.



(d) High speed

- (1) Insert the test tape (TCW-211, etc. 1,500 Hz optional) into Tape Deck A.
- (2) Press Tape Deck A's PLAY button.
- (3) Set to the high-speed condition.
- (4) Short-circuit test points J3438 and J3439.
- (5) Checking the frequency counter reading is 3,000 Hz.
- (6) Press Tape Deck A's STOP button.
- (7) After the completion of the adjustment, remove the short-circuit between test points J3438 and J3439.

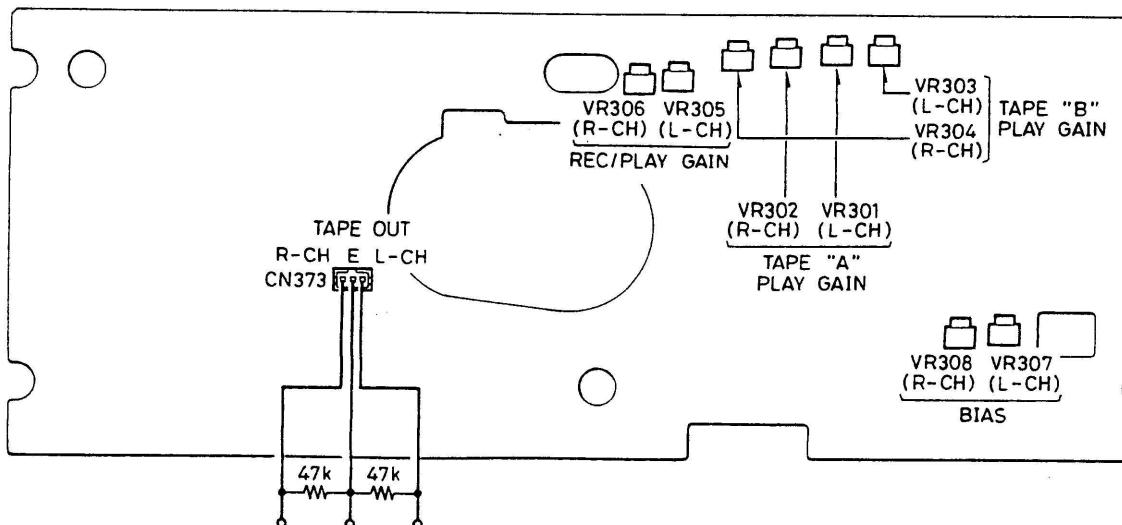
e. CHECKING THE MECHANISM TORQUES

- Clean the head, capstan and pinch roller before making any measurement.

| Measurement | Take-up torque | Back tension | Tape tension |
|--------------------------|------------------------------------|----------------|------------------------------|
| Cassette for measurement | PLAY:TW-2111A F.FWD/REW:TW-2231 | PLAY:TW-2111A | Drive-power cassette TW-2412 |
| PLAY | 30~ 60 gr.cm | 1.5~ 4.5 gr.cm | 60 gr or more |
| F.FWD / REW | 55~ 120 gr.cm | - | - |

AMPLIFIER ADJUSTMENTS

- Make the following adjustments after first cleaning the head and checking the adjustment of the head azimuth.



| Adjustment Item | Test tape | DOLBY NR SW. | Measuring Instrument | Input connection | Output connection | Adjustment location | Adjustment value |
|--|----------------------|--------------|-------------------------------|------------------------------|-------------------|--|------------------------------|
| (a) Playback output adjustment | TCC-130 (Dolby tape) | OFF | AC-voltmeter | - | TAPE OUT (CN373) | (TAPE "A") SVR301 SVR302 (TAPE "B") SVR303 SVR304 | 580 mV |
| (b) Recording / Playback gain adjustment | AC-224 (Normal) | OFF | AC-voltmeter AF-oscillator | VIDEO - 24 dB, 1kHz | TAPE OUT (CN373) | SVR305 SVR306 | 0 ± 1 dB |
| (c) Recording / Playback frequency response adjustment | AC-224 (Normal) | OFF | AC-voltmeter AF-oscillator | VIDEO - 44 dB, 1 kHz, 10 kHz | TAPE OUT (CN373) | SVR307 SVR308 | 0 ± 1 dB at 1 kHz and 10 kHz |

(a) Playback output adjustment

(1) TAPE "A"

Play the test tape and adjust SVR301 (L-CH) and SVR302 (R-CH) so that playback output becomes 580mV.

(2) TAPE "B"

Play the test tape and adjust SVR303 (L-CH) and SVR304 (R-CH) so that playback output becomes 580mV.

(b) Recording / Playback gain adjustment

DOLBY NR switch : OFF

Input signal : - 24 dB, 1 kHz

Tape to be used : NORMAL (AC-224, etc.)

(1) Introduce input signals to the VIDEO terminals, and with the unit in the REC, PAUSE mode.

(2) Record the input signal.

(3) Press the REWIND button and rewind the tape to the beginning of the recording just made.

(4) Press the PLAY button.

(5) Adjust SVR305 (L-CH) and SVR306 (R-CH) so that the recording and playback output level difference become ± 1dB.

(6) Repeat steps (1) to (5).

(c) Recording / Playback frequency response adjustment

DOLBY NR switch : OFF

Input signal : - 44 dB, 1 kHz, 10 kHz

Tape to be used : NORMAL (AC-224, etc.)

(1) Introduce input signals to the VIDEO terminals.

(2) With the unit in the REC mode.

Record these input signals (1 kHz → 10 kHz → 1 kHz → 10 kHz).

(3) Press the REWIND button and rewind the tape to the beginning of the recording just made.

(4) Press the PLAY button.

(5) Adjust SVR307 (L-CH) and SVR308 (R-CH) so that the 10 kHz and 1 kHz output level difference become ± 1 dB.

(6) Repeat steps (1) to (5).

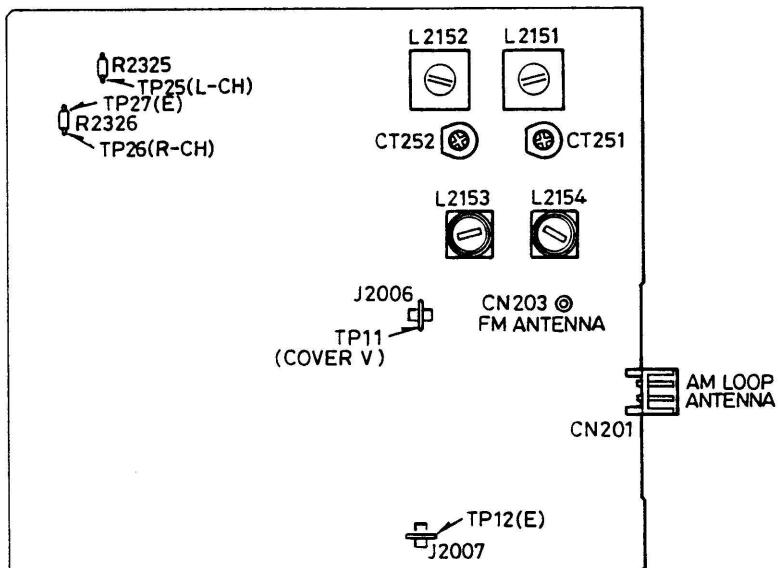
TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- Speaker impedance : 6 ohm
- Standard Output : 500 mW
- FM MODE switch : STEREO
- TUNING

FM : 87.5 - 108.0 MHz (50 kHz step)

MW : 522 - 1,611 kHz (9 kHz step)

LW : 144 - 288 kHz (9 kHz step)



SG RF Level : 75 ohm Open Voltage dB μ V

Antenna : 75 ohm unbalanced , Modulation : 1 kHz,

Dev. : \pm 22.5 kHz (MONO) \pm 22.5 kHz (STEREO) \pm 6.75 kHz (PILOT)

a. CHECKING THE FM BAND

| Step | Adjusting Circuit | Connections | | SG Frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope or DC voltmeter |
|------|-------------------|----------------------------------|---|--------------|-------------------------|------------|--------------------------------------|
| | | Input | Output | | | | |
| 1 | Tuning coverage | --- | Connect to Digital DC voltmeter TP 11 (H), TP 12 (G) | 87.5 MHz | Low end | -- | (more than 0.8V) |
| | | | | 108.0 MHz | High end | -- | (less than 8.0V) |
| 2 | Tracking | FM Antenna (SG = 8dB μ V) | Connect to VTVM TP 25 (H) or TP 26 (H), TP 27 (G) | 90.0 MHz | 90.0 MHz | -- | Max. |
| | | | | 106.0 MHz | 106.0 MHz | -- | |

b. ADJUSTMENTS OF MW BAND

SG Modulation : 1,000 Hz, 30% IRE Loop Antenna

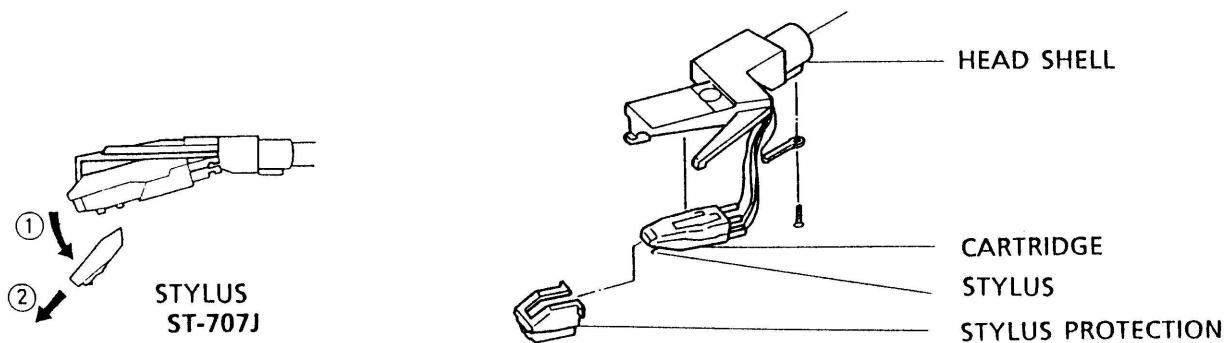
| Step | Adjusting Circuit | Connections | | SG Frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope or DC voltmeter |
|------|-------------------|---|---|--------------|-------------------------|------------|--------------------------------------|
| | | Input | Output | | | | |
| 1 | Tuning coverage | --- | Connect to Digital DC voltmeter TP11 (H), TP12 (G) | 522 kHz | Low end | L2153 | 1.0 \pm 0.05V |
| | | | | 1611 kHz | High end | -- | (less than 9.0V) |
| 2 | Tracking | Connect AM SG to Test Loop (SG = 80dB μ V) | Connect VTVM TP25 (H) or TP26 (H), TP27 (G) | 603 kHz | 603 kHz | L2152 | Max. |
| | | | | 1404 kHz | 1404 kHz | CT252 | |

c. ADJUSTMENTS OF LW BAND

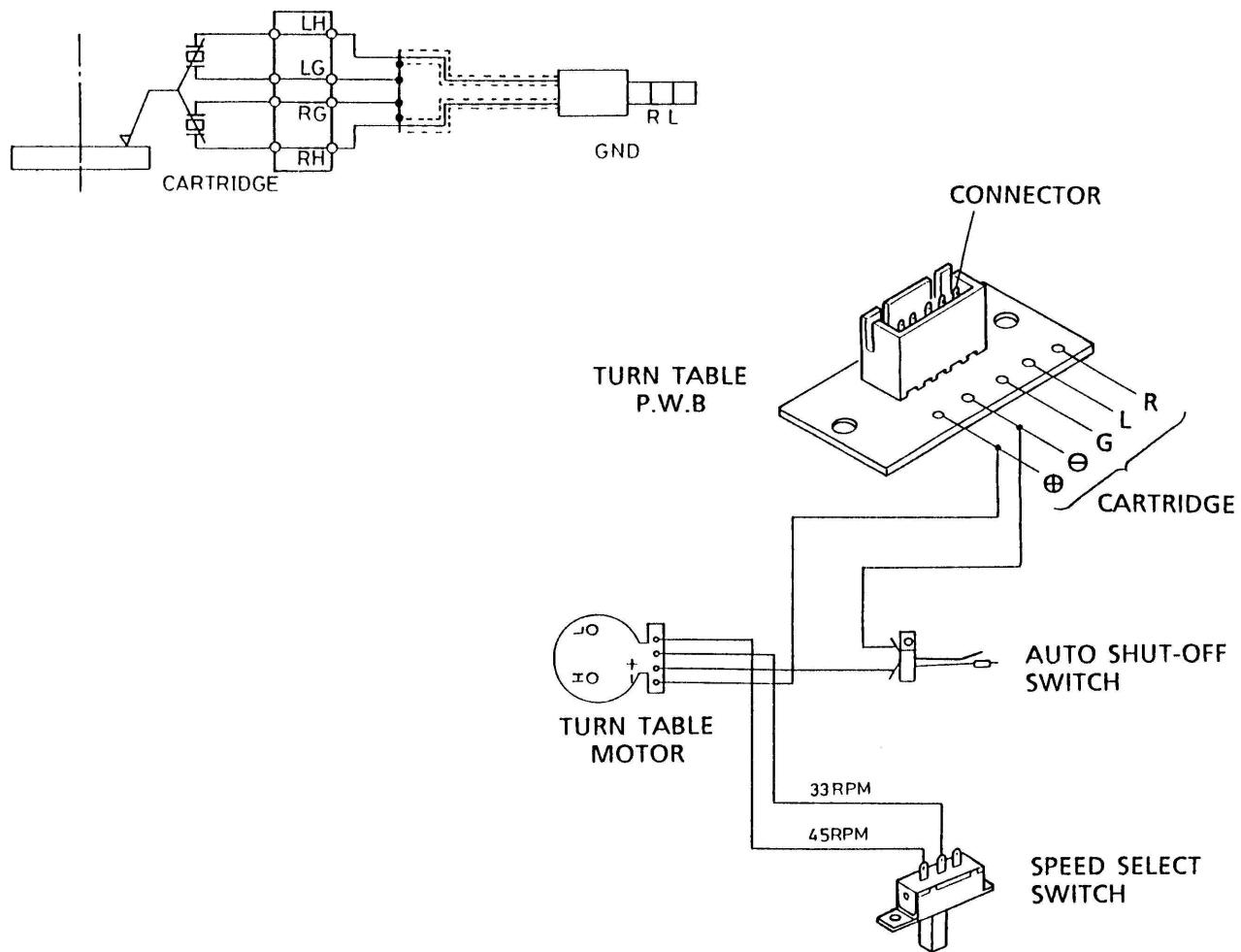
| Step | Adjusting Circuit | Connections | | SG Frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope or DC voltmeter |
|------|-------------------|---|---|--------------|-------------------------|------------|--------------------------------------|
| | | Input | Output | | | | |
| 1 | Tuning coverage | --- | Connect to Digital DC voltmeter TP11 (H), TP12 (G) | 144 kHz | Low end | L2154 | 1.5 \pm 0.05V |
| | | | | 288 kHz | High end | -- | (less than 9.0V) |
| 2 | Tracking | Connect AM SG to Test Loop (SG = 85dB μ V) | Connect to VTVM TP25 (H) or TP26 (H), TP27 (G) | 162 kHz | 162 kHz | L2151 | Max. |
| | | | | 279 kHz | 279 kHz | CT251 | |

REPLACEMENT OF STYLUS

After a long period off use or when an inferior sound is obtained, the stylus assembly should be replaced with a new one.
To remove the stylus assembly, pull it downwards gently.
To mount the new one, re-assemble in reverse order.



SCHEMATIC & WIRING DIAGRAM (TURNTABLE)



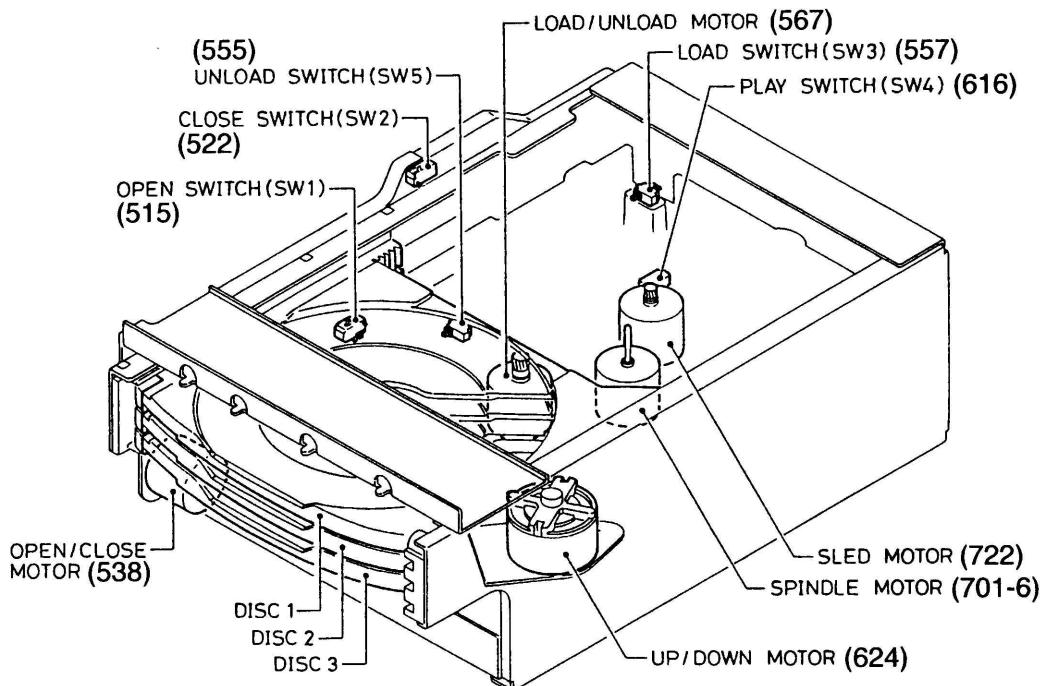
CD CHANGER OPERATION DESCRIPTION

- This set is capable of stocking and playing up to 3 CDs.
- While playing a CD, other discs can be replaced.

In this case, press the button for the disc No. you wish to remove, and then press the OPEN/CLOSE button.

- When the "POWER" button is turned off, the power turns off after the discs are loaded in the disc trays.

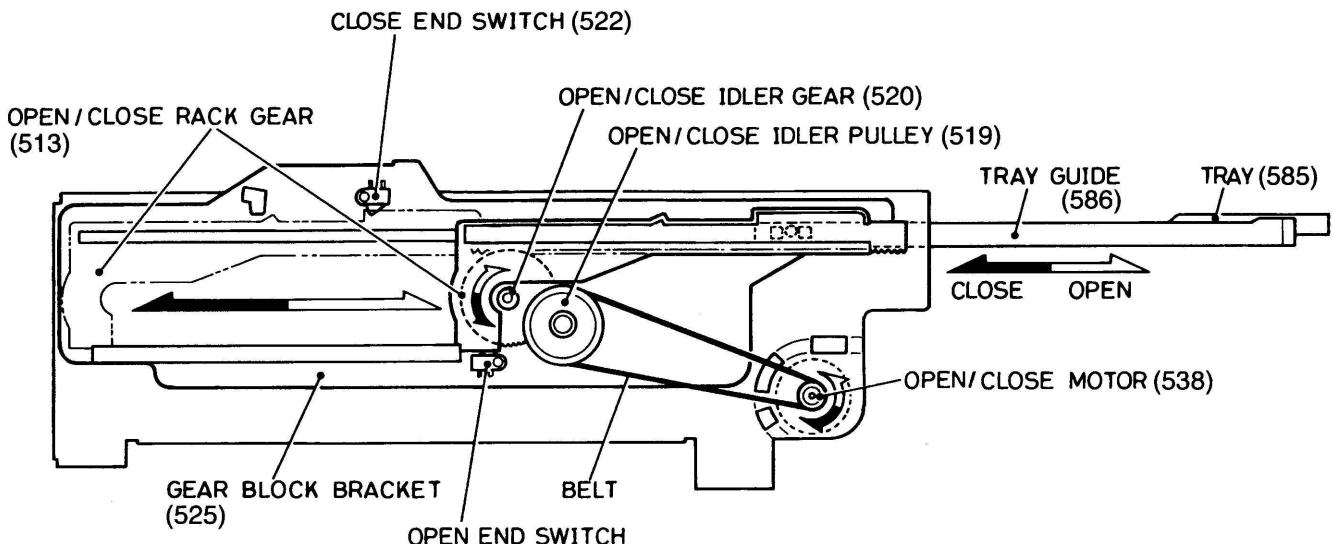
a. MOTOR & MECHANISM SWITCHES LAYOUT



b. FUNCTION

(1) OPEN/CLOSE

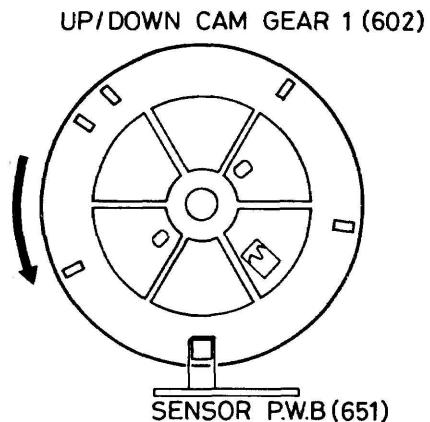
(a) The rotation of the OPEN/CLOSE MOTOR rotates the OPEN/CLOSE IDLER GEAR via the BELT and PULLEY, and the RACK GEAR which is intermeshed with the OPEN/CLOSE IDLER GEAR moves forward during "OPEN", backwards during "CLOSE".



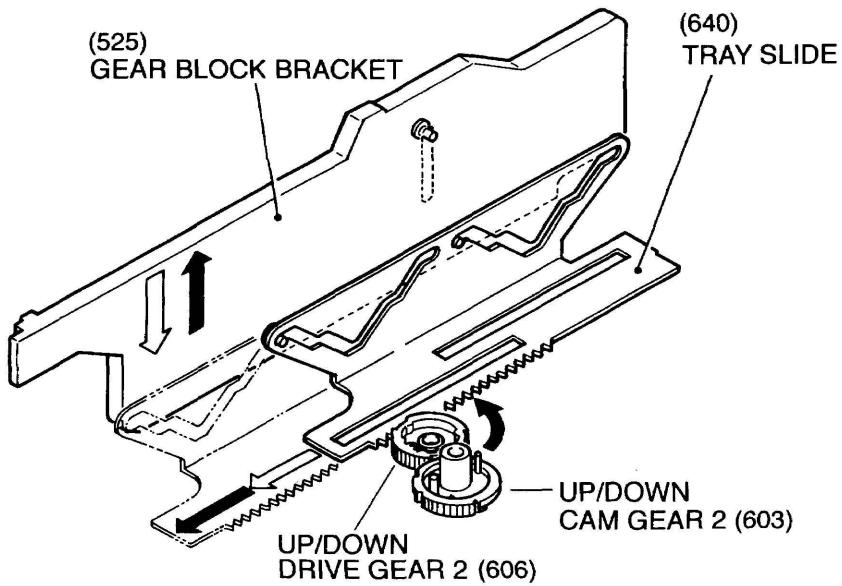
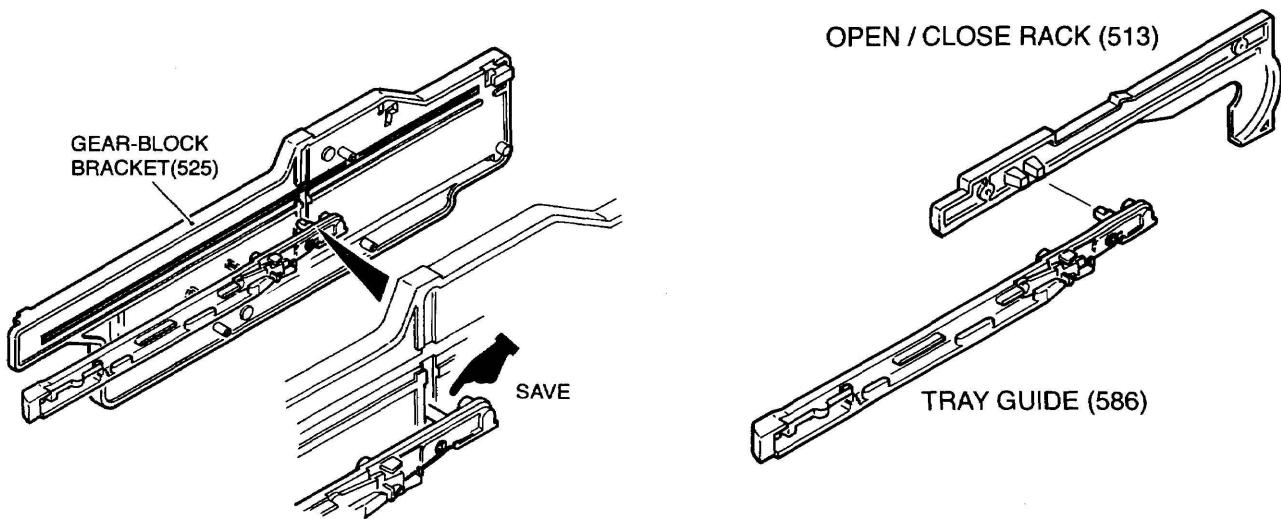
CD CHANGER OPERATION DESCRIPTION

- The HOME POSITION is reached when the largest square hole in the UP/DOWN CAM GEAR (602) is between the SENSORS.

(b) Rotate the UP/DOWN CAM GEAR (602) counterclockwise (with OPEN/CLOSE during PLAY) or clockwise (with normal OPEN/CLOSE), raise the GEAR-BLOCK BRACKET, stop at the selected TRAY, hold the TRAY GUIDE by means of the OPEN/CLOSE RACK and save the other TRAY GUIDES.

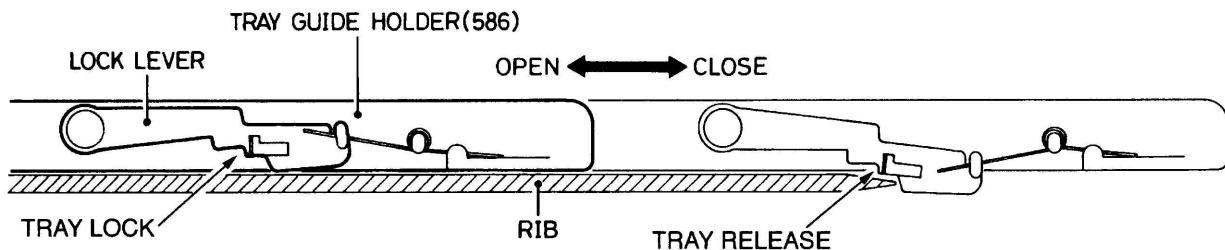


(c) The OPEN/CLOSE motor starts running, the OPEN/CLOSE RACK moves forward, the TRAY LOCK LEVER is raised to lock the TRAY, and the OPEN operation commences.



CD CHANGER OPERATION DESCRIPTION

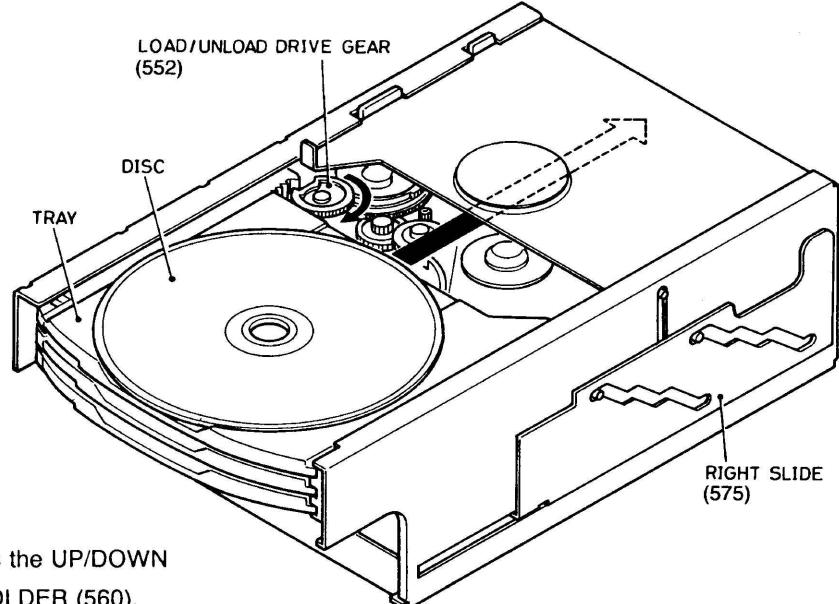
(d) When the TRAY closes and it reaches the tip of the RIB part of the LEFT TRAY GUIDE (589), the LOCK LEVER is lowered to release the TRAY, and loading proceeds.



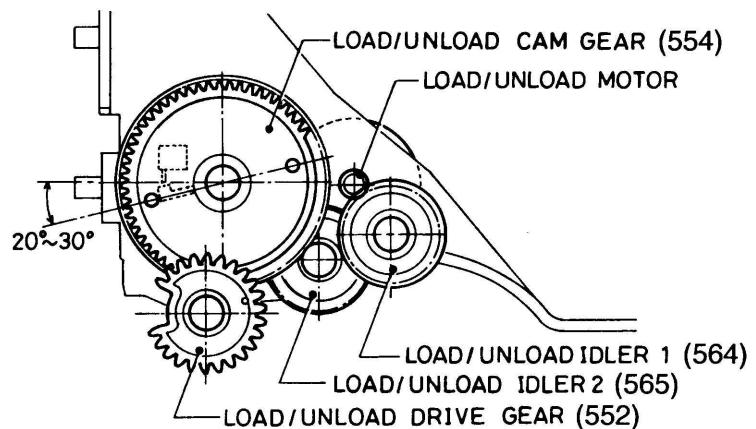
(2) LOADING

(a) The rotation of the LOAD/UNLOAD MOTOR rotates the LOAD/UNLOAD DRIVE GEAR (552) in the clockwise direction.

(b) The DRIVE GEAR and the gear portion of the TRAY mesh together and the TRAY moves backwards.

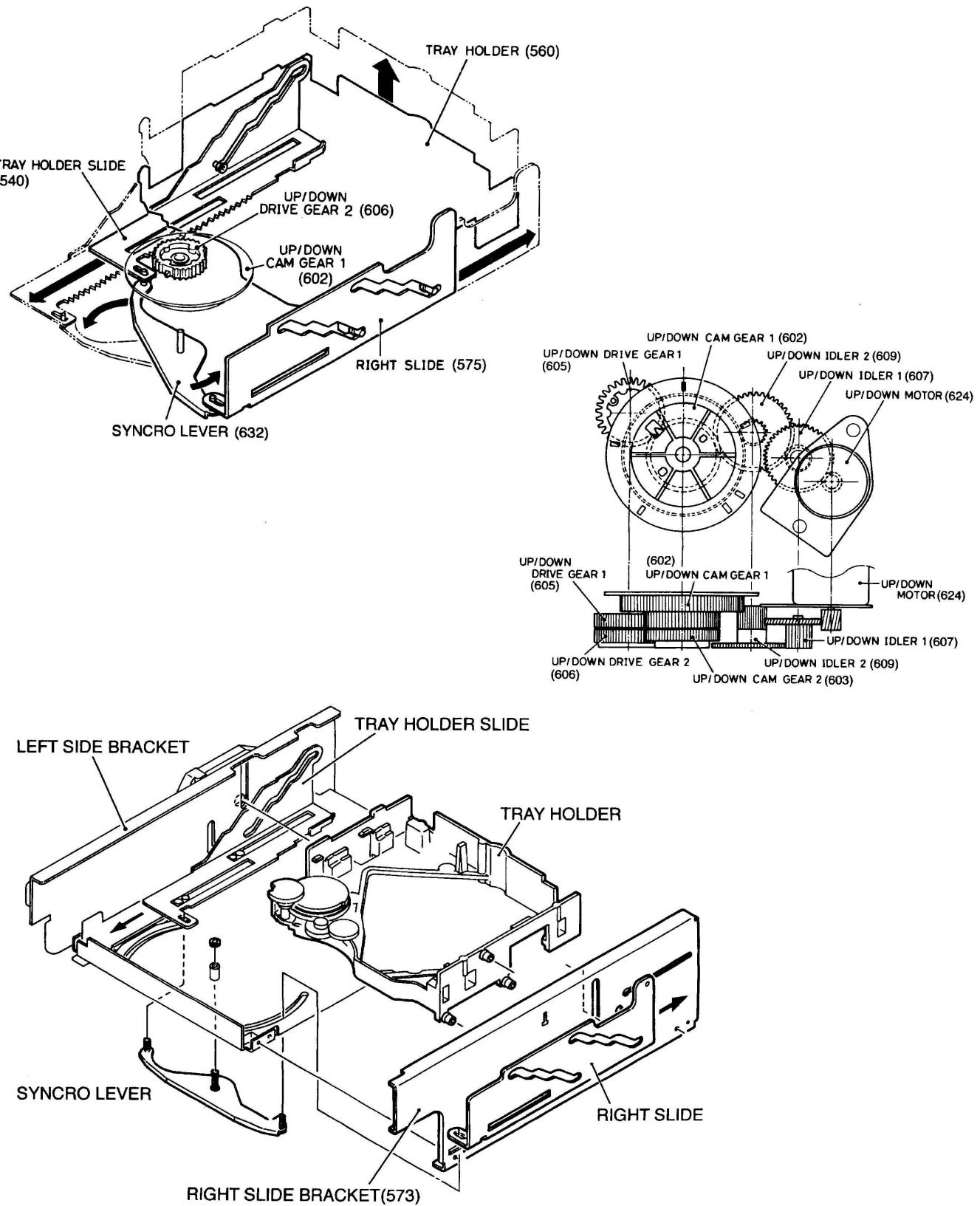


(c) The completion of TRAY movement causes the UP/DOWN MOTOR to operate and lower the TRAY HOLDER (560), putting the unit to chucking stayus.



CD CHANGER OPERATION DESCRIPTION

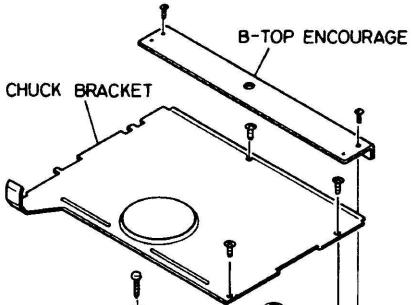
(d) The rotation of the UP/DOWN MOTOR (624) rotates the UP/DOWN DRIVE GEAR (605) in the counter-clockwise direction. In connection with this, the TRAY HOLDER SLIDE (540) moves forward, and at the same time, the RIGHT SLIDE (575) is moved backwards by the SYNCRO LEVER (632).



CD CHANGER REPLACEMENT

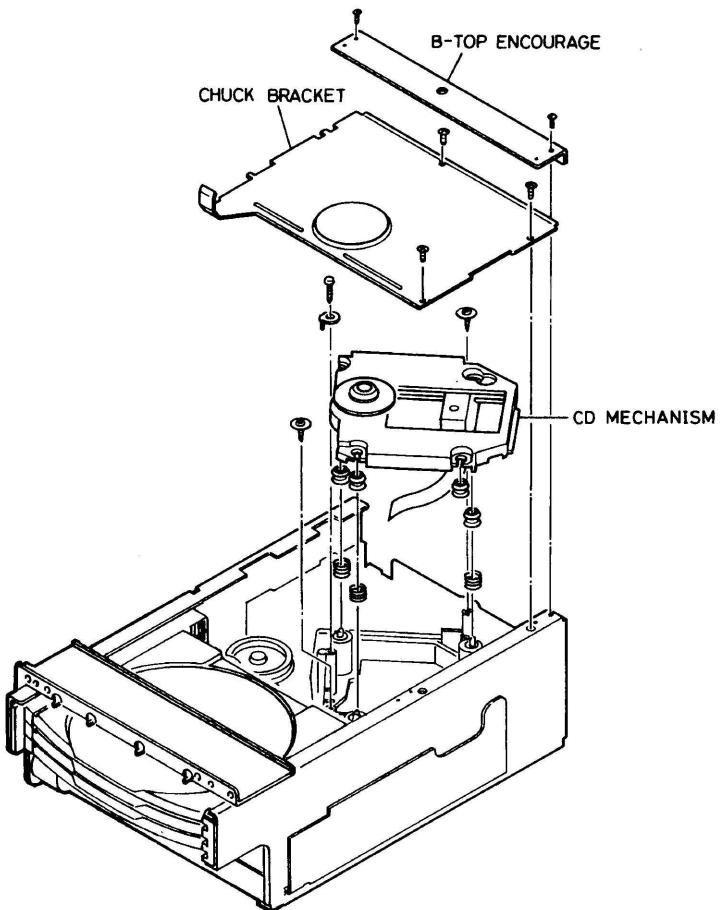
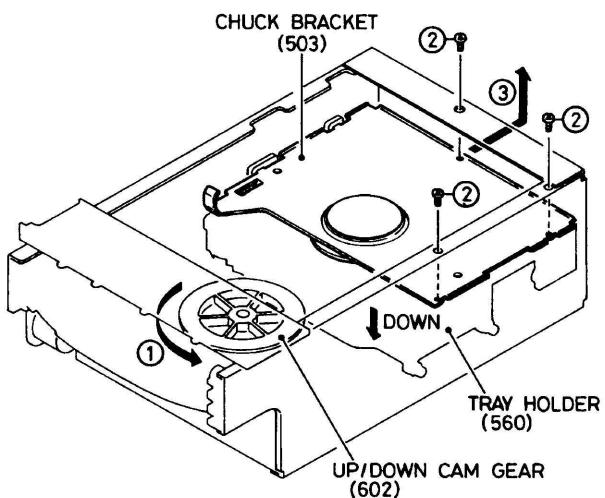
a. LOAD/UNLOAD FUNCTION

- (1) Remove the B TOP ENCOURAGE.
- (2) Remove the CD MECHANISM.

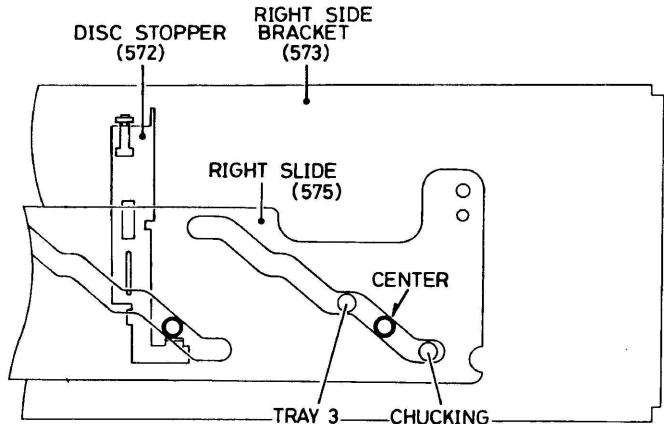


b. HOW TO REMOVE THE TRAYS

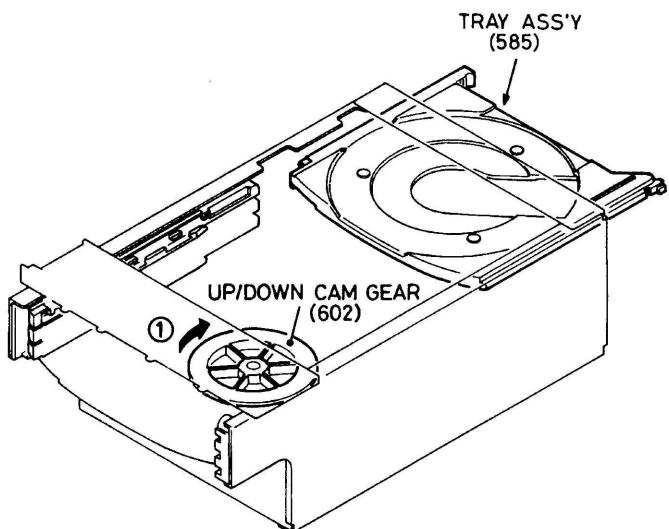
- (1) Remove the CHUCK BRACKET.



- (2) Rotate the UP/DOWN CAM GEAR (602) and position the collar part of the TRAY HOLDER visible from the RIGHT SLIDE at the midpoint between the CHUCKING and TRAY 3.



- (3) Remove the three TRAYS through the gap at the back.



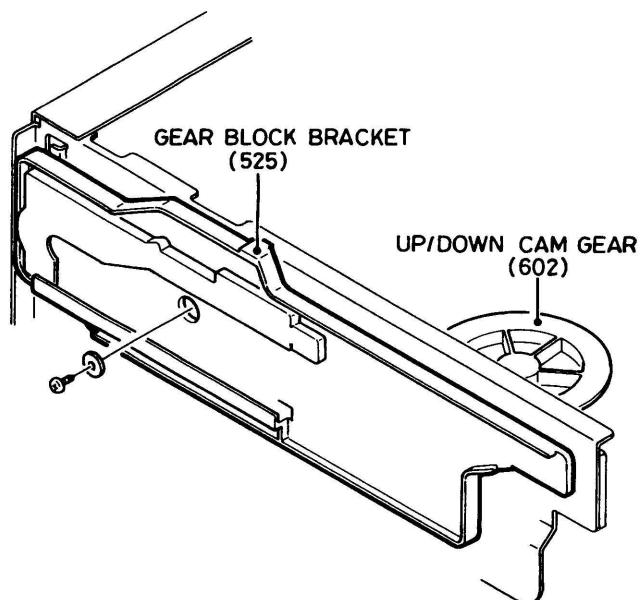
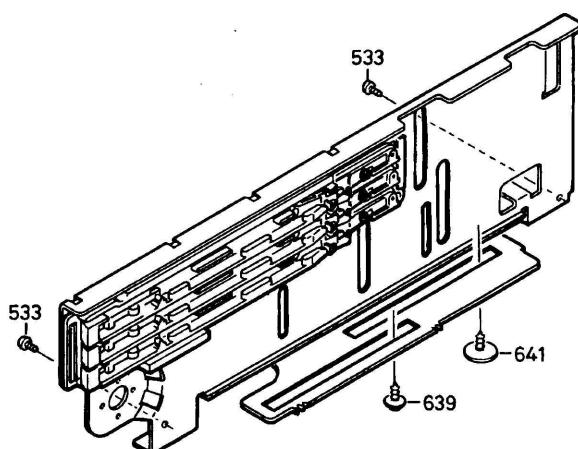
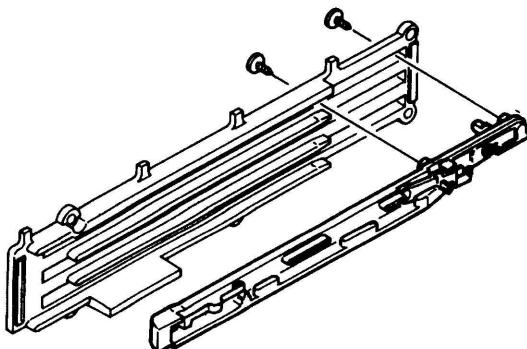
CD CHANGER REPLACEMENT

c. REPLACING THE TRAY GUIDE

- Have the LEFT TRAY GUIDE HOLDER and TRAY GUIDE ready before proceeding.

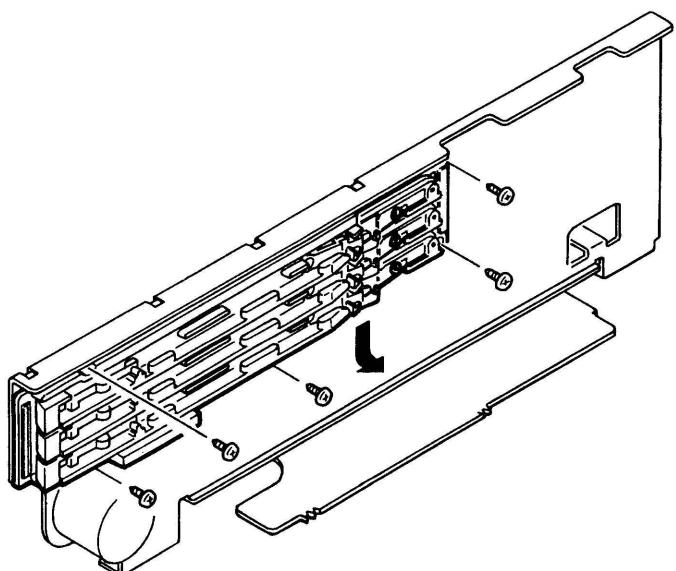
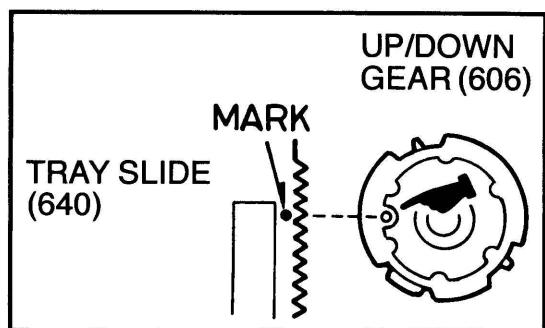
(1) Turn the UP/DOWN CAM GEAR (602) and remove the setscrew of the TRAY HOLDER from the hole in the GEAR BLOCK BRACKET.

(2) Turn the UP/DOWN CAM GEAR (602) counterclockwise as far as it will go, and remove the SCREWS (533 x 2, 639, 641).



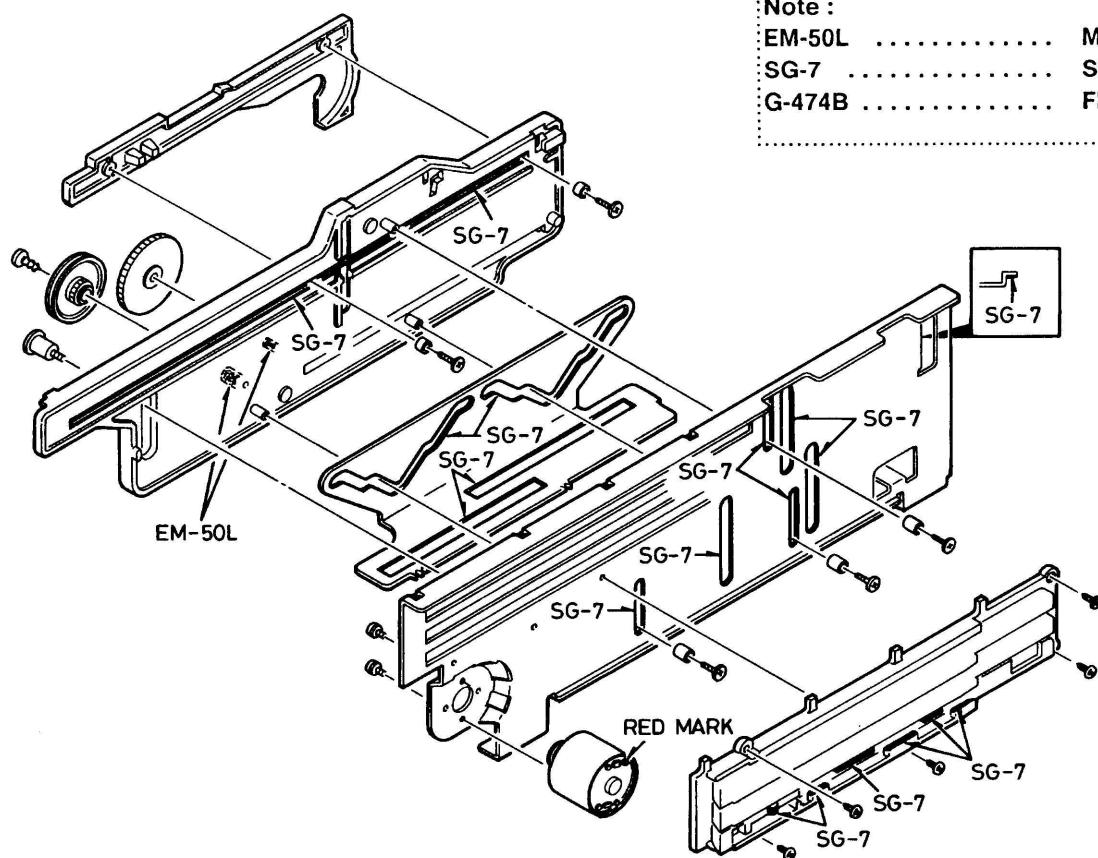
(3) Remove the five setscrews of the LEFT TRAY GUIDE HOLDER, and remove it in the direction of the arrow.

(4) When assembling the parts, align the TRAY SLIDE (640) and UP/DOWN DRIVE GEAR (606).

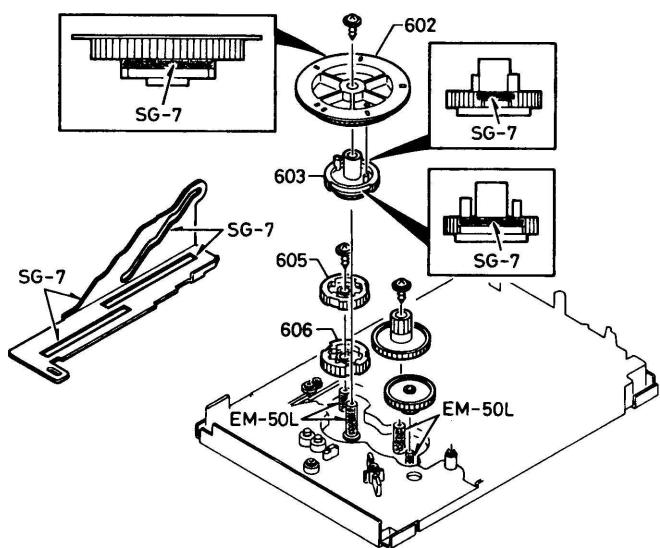


CD CHANGER REPLACEMENT

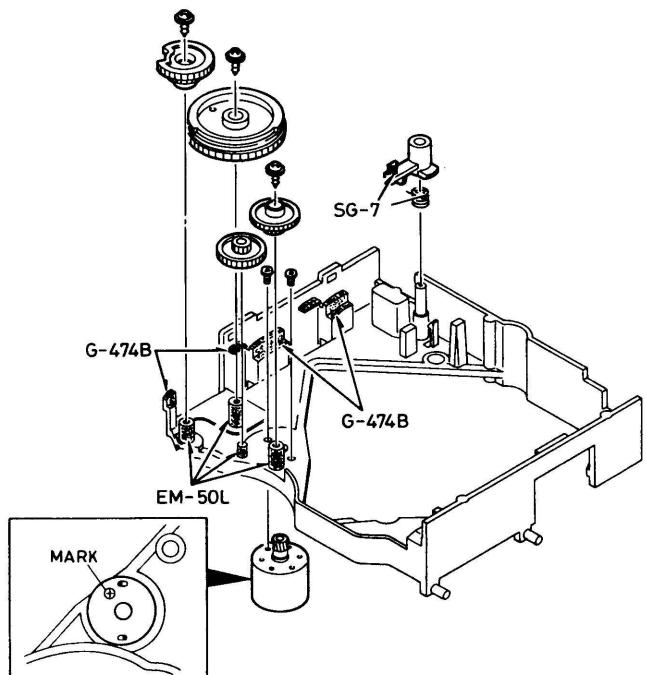
d. LEFT SIDE BRACKET



e. UP/DOWN CAM GEAR



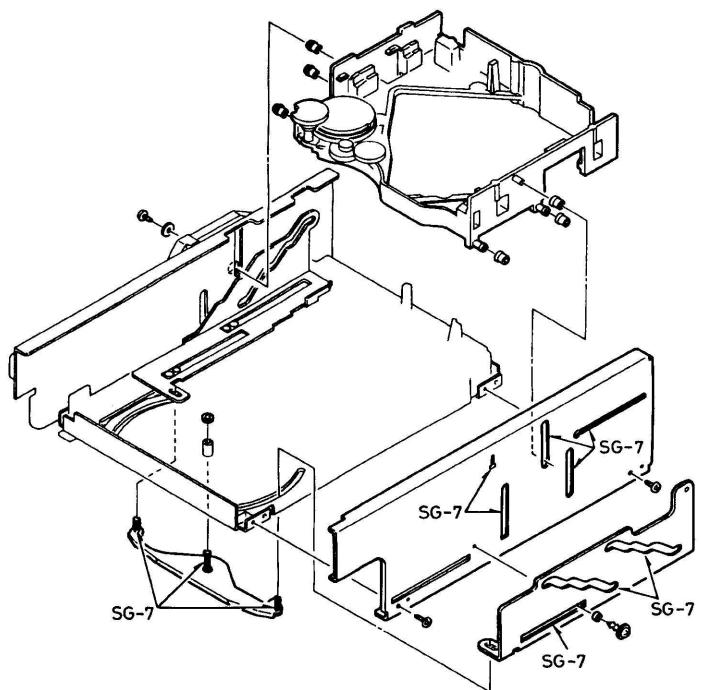
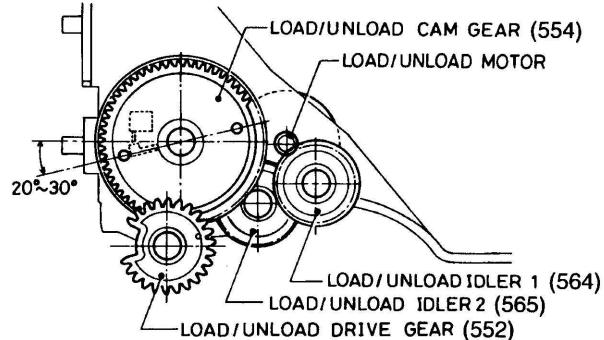
f. LOAD/UNLOAD GEAR



CD CHANGER REPLACEMENT

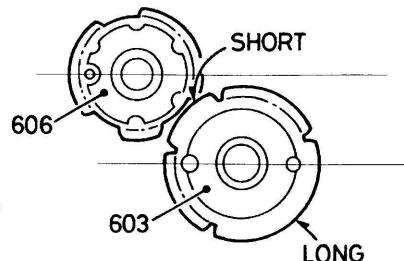
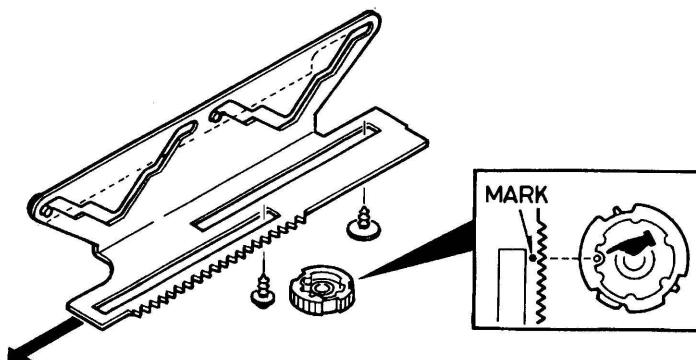
g. SETTING UP THE LOAD/UNLOAD GEAR

h. TRAY HOLDER



i. SETTING UP THE TRAY SLIDE AND UP/DOWN DRIVE GEAR (603)

- (1) Slide the TRAY SLIDE forward until it goes no further.
- (2) Align the round mark on the UP/DOWN DRIVE GEAR with the mark area on the TRAY SLIDE, and install.
- (3) Align the shorter flat part of the UP/DOWN CAM GEAR (603), and install.

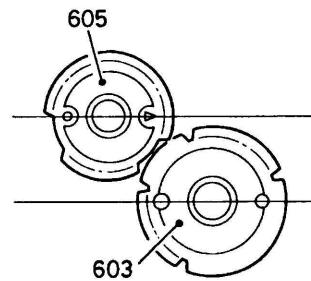


- Set the parts in such a way that the round marks on the two GEARS (606, 603) are horizontal.

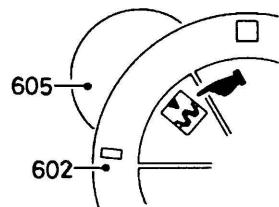
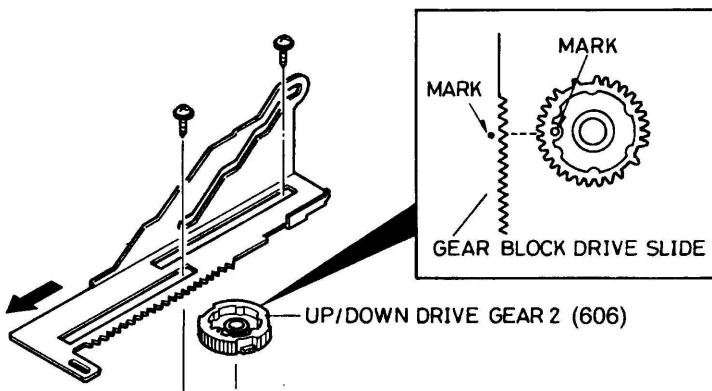
CD CHANGER REPLACEMENT

j. SETTING UP THE TRAY HOLDER AND UP/DOWN DRIVE GEAR (605)

- (1) Loosen and install the SET SCREW of the SENSOR P.W.B.
- (2) Slide the TRAY HOLDER SLIDE forward until it goes no further.
- (3) Align the round mark on the UP/DOWN GEAR (605) with the mark area on the TRAY HOLDER SLIDE, and install.
- (4) Secure the screw.
- (5) As shown in the figure, place the UP/DOWN DRIVE GEAR (603) and UP/DOWN CAM GEAR (605) in such a way that they are horizontal.
- (6) Align with the triangular mark through the hole through which the UP/DOWN CAM GEAR teeth are visible.
- (7) Secure the SCREW of the SENSOR and GEAR.

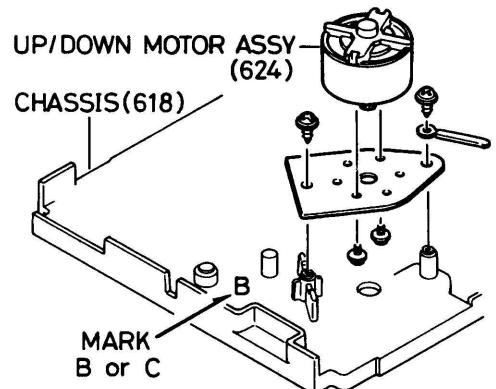


- Set the parts in such a way that the round marks on the two GEARS (606, 603) are horizontal.



k. TRAY HOLDER SLIDE

There are two types UP/DOWN MOTOR (624) which have been used. These UP/DOWN MOTOR (624) can be used not interchangeably. Use the following procedure in accordance with which type of UP/DOWN MOTOR (624) and chassis (618) you will replace. Please be sure which type of motor you have before serving.

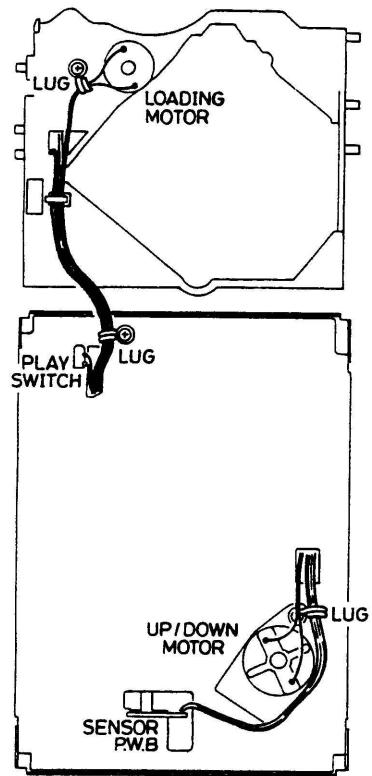
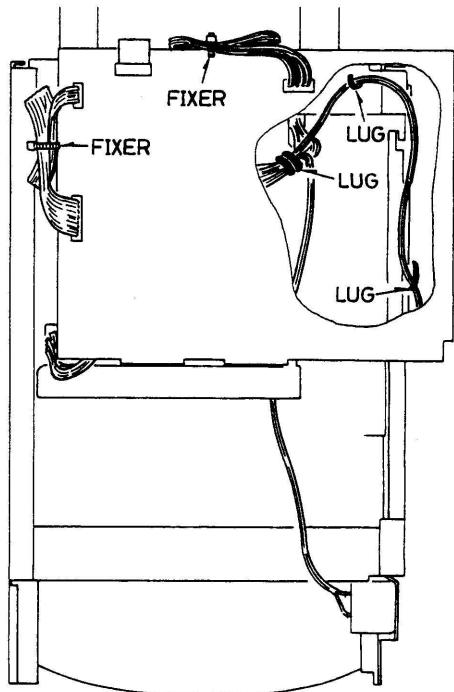


| TYPE | 1 | 2 |
|--------------------------------|----------------|----------------|
| CHASSIS (618) MARK | B | C |
| UP/DOWN MOTOR ASSY (624) | 10.0 mm | 10.5 mm |
| (PART No.) | (614 268 2890) | (614 287 0440) |

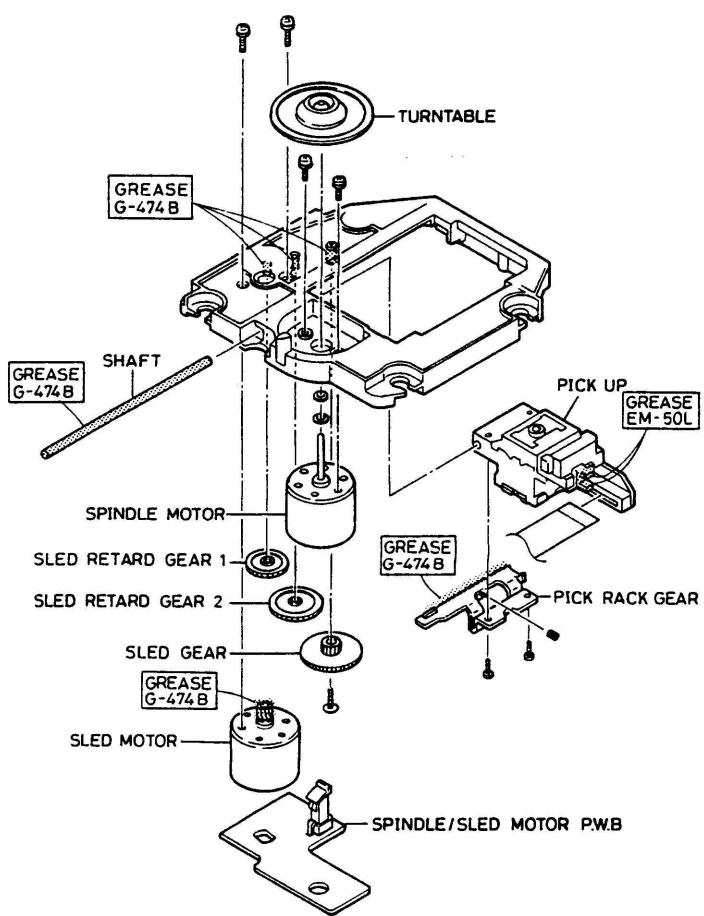
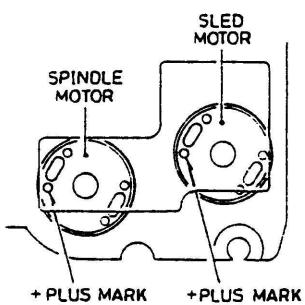
CD MECHANISM ADJUSTMENTS

a. REPLACEMENT AND LUBRICATION OF THE CD MECHANISM

| | |
|--------|-------------------|
| Note : | |
| EM-50L | MOLYKOTE, EM-50L |
| SG-7 | SAN GREASE, SG-7 |
| G-474B | FLOIL OIL, G-474B |



b. CD BASE MECHANISM



CD MECHANISM ADJUSTMENTS

c. CD MECHANISM

(a) Replacement of the spindle motor

- First, prepare the new turntable (701-1) and new special washer (701-4,701-5) for replacement.

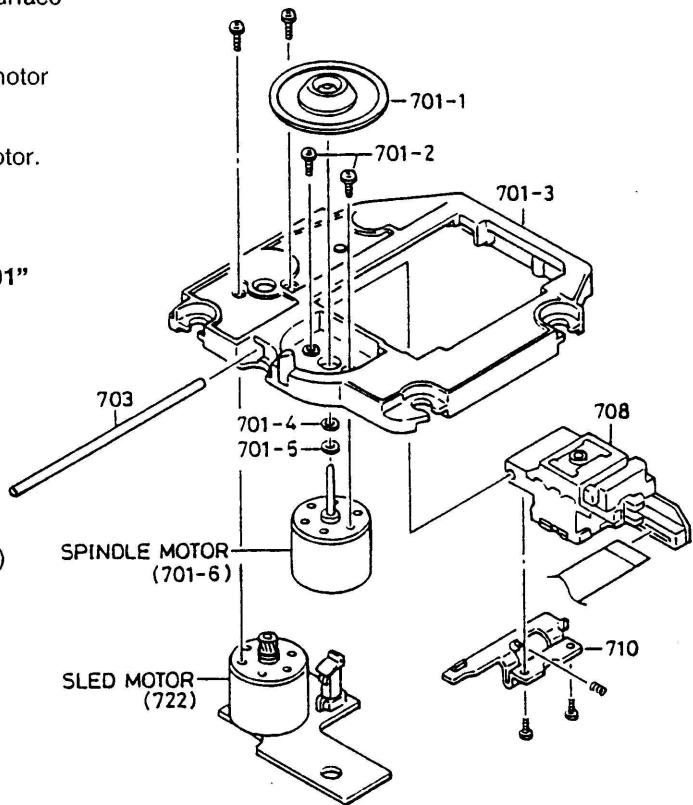
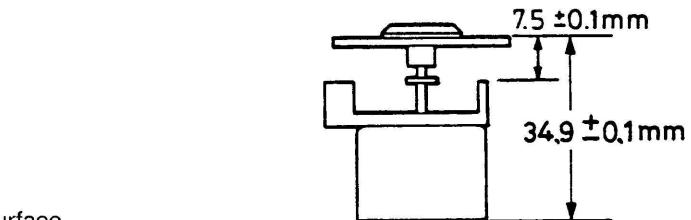
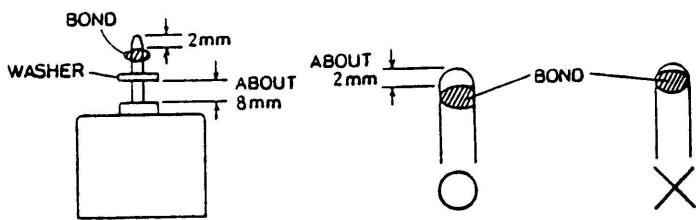
The removed turntable will be deformed by the heat of the soldering iron, and cannot be reused.

- Prepare dial-type calipers.

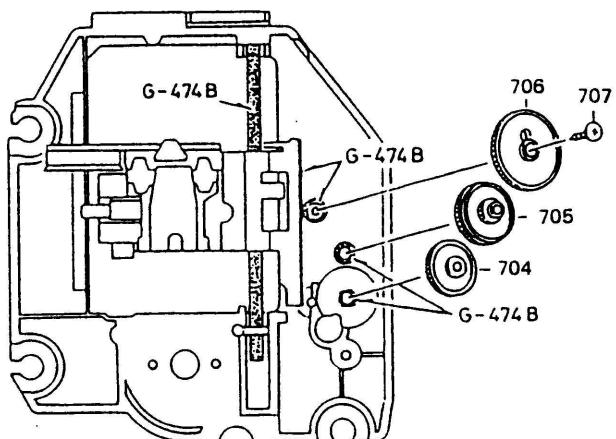
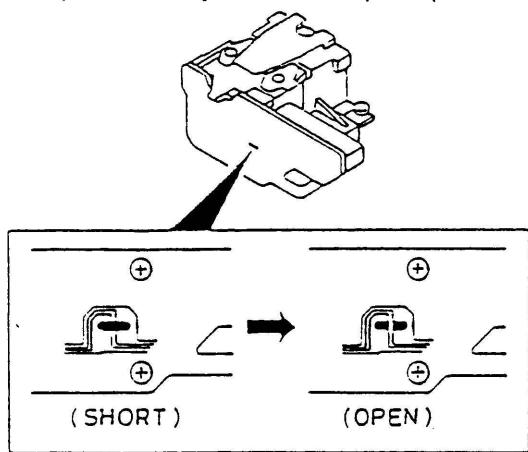
- The attached bonding material can be dissolved by using a 60W soldering iron to heat the shaft at the upper part of the turntable for about one minute.
- The turntable can then be removed from the shaft by very carefully applying force upward at the center of the lower surface of the turntable.
- Remove the two screws (701-2) and remove the spindle motor (701-6).
- Attach the special washer (701-4, 701-5) to the spindle motor.
- Clean the spindle motor's shaft. To clean them, use a soft cloth soaked in isopropyl alcohol.
- Apply a small amount of a mixture of the "Three Bond 2001" and "2015F" bonding materials to the motor's shaft.
- Install the turntable as shown in the figure.
- Secure the turntable by pressing gently. Be sure to wipe away (by using a piece of cloth, or similar material) any bonding material coming out of the hole.

(b) Replacing the pick-up

- Insert the pick-up rail (703) into the base chassis. (701-3)
- If the lach of the base chassis (701-3) are missing when the pick-up rails have been installed, first wipe the tips of the rail with alcohol.
- After the pick-up has been replaced, apply grease (FLOIL G-474B) to the  sections.
- The pick-up P.W.Board pattern is "shorted", as shown in the figure, so that the new pick-up will not be susceptible to the effects of static.
- Set the pattern to "open" after the pick-up has been replaced.



(BE SURE AT THIS TIME,
NOT TO TOUCH ANY OTHER PART.)



CD PLAYER ADJUSTMENTS

a. PREPARATIONS

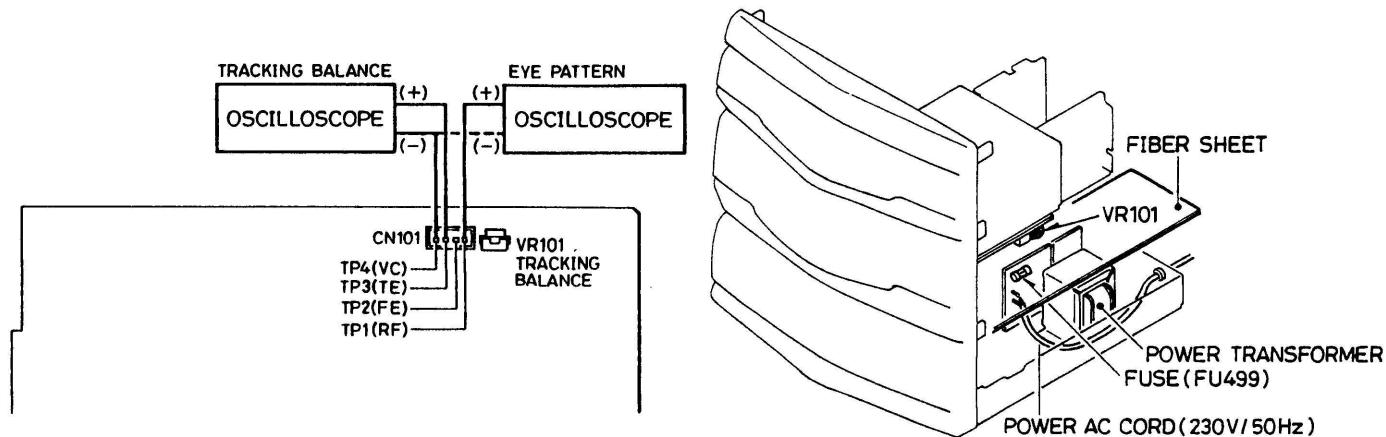
(a) Measuring instruments, tools and filter

- (1) Test disc. : YEDS 18 (SONY) or etc.
- (2) Oscilloscope : SS5711 (10 MHz or dual-phenomenon)
or Memoryscope : DSS6521 (Storagescope)
- (3) Screwdrivers (non-metallic) for adjustments

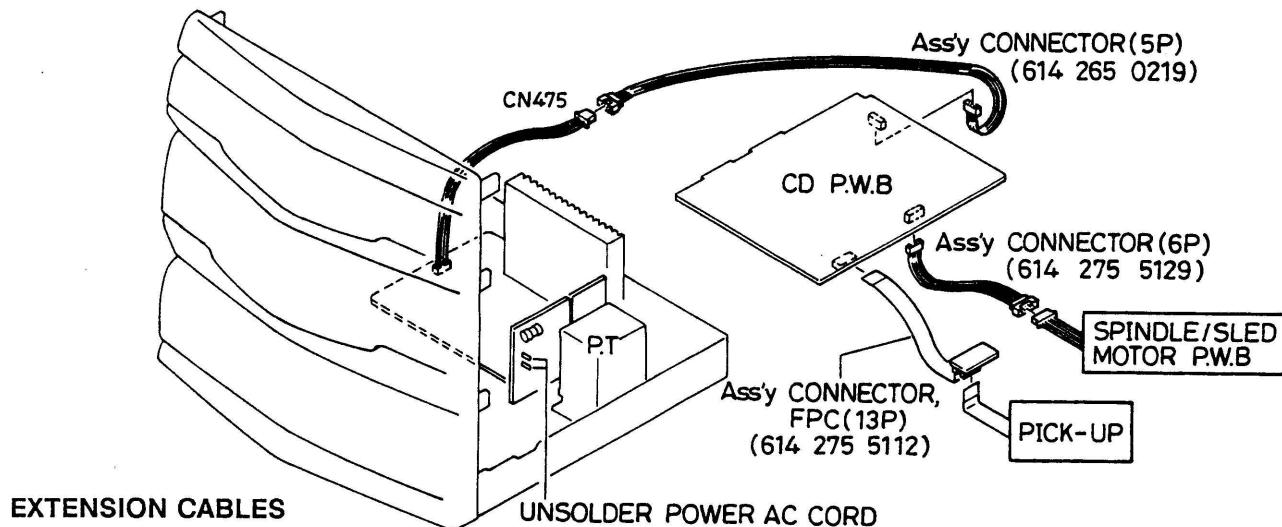
PRECAUTIONS WHEN PERFORMING CD UNIT ADJUSTMENTS

- Take care not to touch the fuse or the part where the AC power cord is connected.
- As shown in the figure, first use the fiber sheet and other insulating sheets to ensure that the live parts will not be touched, and then proceed with the adjustments.

b. PARTS LOCATION



c. TEST CABLES CONNECTION



| No. | PART No. | DESCRIPTION |
|-----|--------------|-------------------------------|
| 1 | 614 275 5112 | ASSY, CONNECTOR, 13P, FPC |
| 2 | 614 275 5129 | ASSY, CONNECTOR, 6P |
| 3 | 614 265 0219 | ASSY, CONNECTOR, 5P |

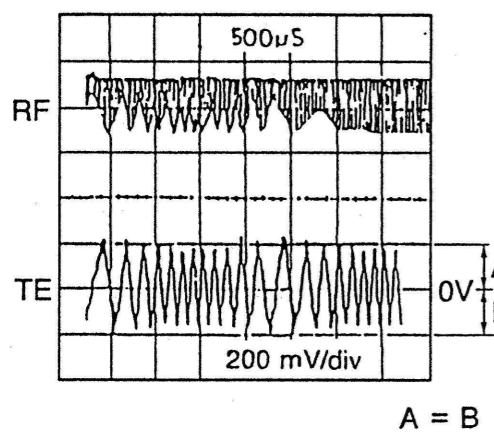
CD PLAYER ADJUSTMENTS—

d. ADJUSTMENTS

| Adjustment item | Measuring instrument | Input connection | Output connection | Adjustment location | Adjustment value |
|--------------------------------|----------------------|------------------|------------------------|---------------------|---|
| (a) Tracking balance | Oscilloscope | — | TP 3 : TE TP 4 : VC | VR101 | Waveform symmetry $A = B$ |
| (b) Checking the "eye" pattern | Oscilloscope | — | TP 1 : RF TP 4 : VC | — | Check be sure that the "eye" pattern is at the center of the waveform and that the diamond shape is clearly defined |

(a) Tracking balance adjustment

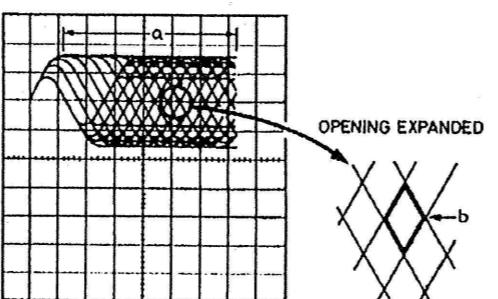
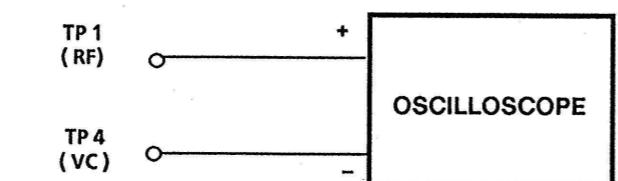
- (1) Within one second after pressing **FM MODE** & **SOUND PRESET** switches at the same time, press the **MEMORY** switch. (①,②)
(Service mode : TRACKING BALANCE)
- (2) Connect an oscilloscope to TP3 (TE) and TP4 (VC).
- (3) Set the test disc. (DISC 1)
- (4) PLAY / PAUSE switch push "ON".
- (5) Adjust VR101 so that the oscilloscope's waveform is symmetrical, as shown in the illustration.
- (6) To cancel service mode, disconnect the power cord's plug from the electrical outlet.



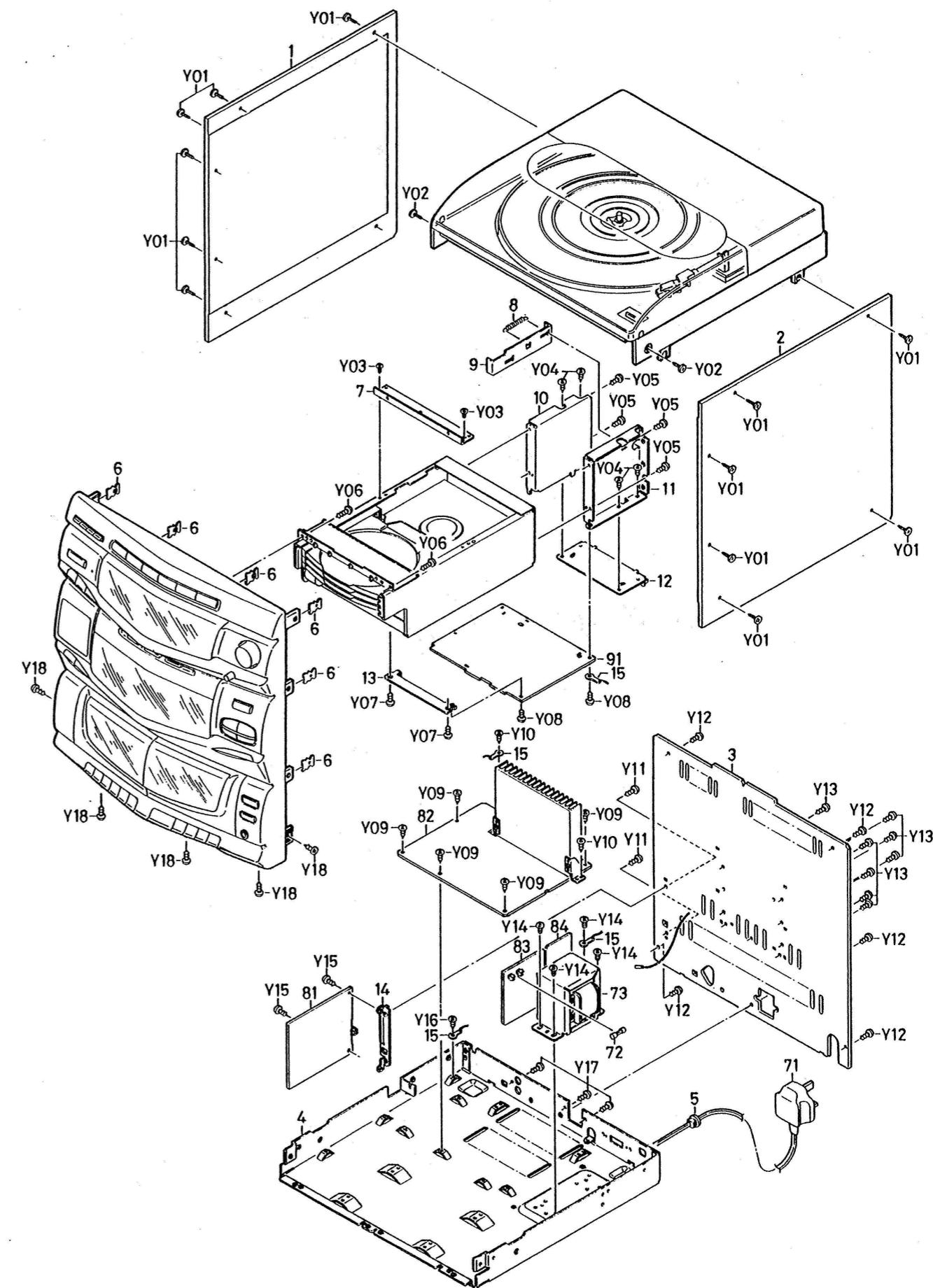
$$A = B$$

(b) Checking the "eye" pattern

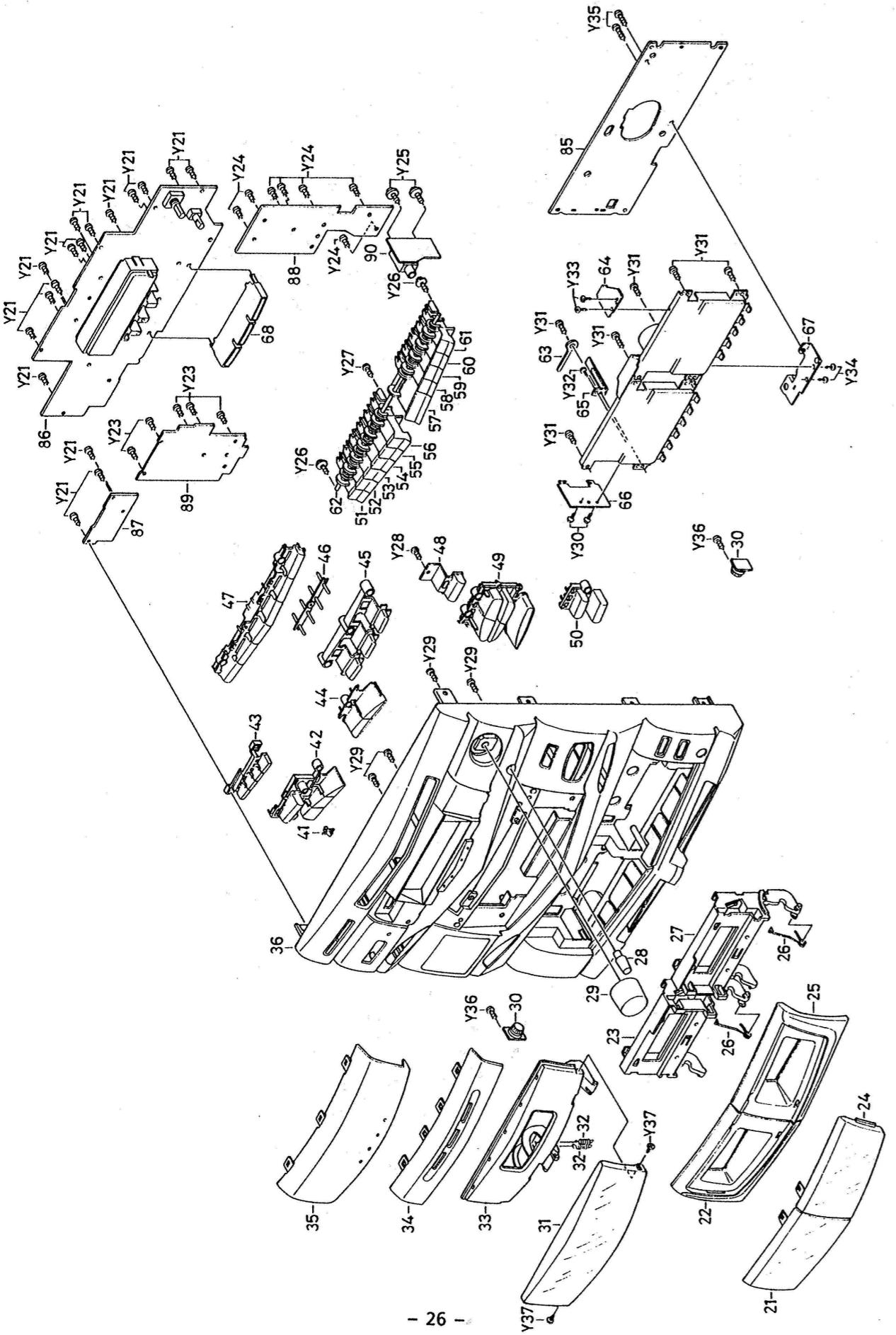
- (1) Switch "ON" the POWER.
- (2) Connect an oscilloscope to TP1 (RF) and TP4 (VC).
- (3) Load the test disc.
- (4) PLAY switch push ON.
- (5) Check to be sure that the " eye " pattern is at the center of waveform and that the diamond shape is clearly defined.
- (6) Press the STOP button.
- (7) Switch "OFF" the POWER.



EXPLODED VIEW (CABINET & CHASSIS) -



EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CAUTION: Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

Regular type resistors are less than 1/4W carbon type and 0 ohm chip resistors.

Regular type capacitors are less than 50V and less than 1000 μ F type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

| Ref. No. | Part No. | Description |
|----------|--------------|------------------------------------|
| | 614 279 2995 | CARTON CASE,SET |
| | 614 279 3015 | CUSHION, TOP |
| | 614 279 3008 | CUSHION, BOTTOM |
| | 614 279 3039 | INSTRUCTION MANUAL |
| | 645 008 5581 | POLY SHEET-1650X550MM |
| | 614 245 8587 | NOTICE,AC POWER CORD |
| | 614 189 3778 | CAUTION LABEL,CAUTION (SIDE PANEL) |
| | 614 224 3480 | LABEL,PLAYER |
| | 614 281 1078 | LABEL,CAUTION,CAUTION, CARRING |
| | 645 020 7020 | ASSY,ANTENA,LOOP,AM |
| | 645 017 5930 | REMOCON,RB-X1050,REMOTE CONTEOL |
| | 614 285 3993 | LID,BATTERY,REMOTE CONTROL |

CABINET & CHASSIS

| Ref. No. | Part No. | Description |
|----------|--------------|--|
| 1 | 614 279 2728 | PANEL,SIDE,LEFT |
| 2 | 614 279 2735 | PANEL,SIDE,RIGHT |
| 3 | 614 279 2742 | PANEL,REAR |
| 4 | 614 279 2001 | ASSY,CABINET,BOTTOM |
| 5 | 614 129 1901 | FIXER,AC POWER CORD |
| 6 | 614 264 0197 | MOUNTING,BRACKET-E,JOINT (FRONT-SIDE) |
| 7 | 614 266 1918 | JOINT,CD MECHANISM, TOP |
| 8 | 614 286 5507 | SPRING,TENS,SHIPPING |
| 9 | 614 286 2735 | SLIDE,SHIPPING SLIDE |
| 10 | 614 284 3628 | HOLDER MECHA, CD MECHA REAR (L) |
| 11 | 614 284 3635 | HOLDER MECHA, CD MECHANISM REAR (R) |
| 12 | 614 284 3611 | HOLDER MECHA, CD MECHANISM REAR,BOTTOM |
| 13 | 614 284 3680 | HOLDER PWB,CD PWB |
| 14 | 614 283 2127 | HOLDER TUNER,TUNER PWB |
| 15 | 614 129 9136 | LUG,GROUND |
| 21 | 614 282 9219 | DEC,WINDOW,DECK B |
| 22 | 614 281 8749 | COVER,DECK B |
| 23 | 614 279 2612 | LID,CASSETTE,DECK B |
| 24 | 614 282 9226 | DEC,WINDOW,DECK A |
| 25 | 614 281 8756 | COVER,DECK A |
| 26 | 614 284 8067 | SPRING,WIRE,C-CASSETTE |
| 27 | 614 279 2629 | LID,CASSETTE,DECK A |
| 28 | 614 279 2568 | KNOB,ROTARY,BALANCE |
| 29 | 614 279 2551 | KNOB,ROTARY,VOLUME |
| 30 | 614 270 8316 | ASSY,GEAR |

| Ref. No. | Part No. | Description |
|----------|--------------|--|
| 31 | 614 279 2322 | DEC,WINDOW,CD |
| 32 | 614 284 8050 | SPRING,TENS,CD LID OPEN |
| 33 | 614 279 2599 | LID,CD |
| 34 | 614 281 8770 | DEC,ESCUTCHEON, CD WINDOW |
| 35 | 614 279 2339 | DEC,WINDOW,CD TUNER |
| 36 | 614 279 2094 | ASSY,PANEL,FRONT |
| 41 | 614 283 5654 | DEC,LED |
| 42 | 614 279 2155 | BUTTON,POWER/FUNCTION |
| 43 | 614 279 2131 | BUTTON,CLOCK |
| 44 | 614 279 2186 | BUTTON,DISC CHECK |
| 45 | 614 279 2179 | BUTTON,DISC |
| 46 | 614 280 9761 | DEC,LED,STANDBY |
| 47 | 614 279 2148 | BUTTON,TUNER |
| 48 | 614 279 2193 | BUTTON,OPEN/CLOSE |
| 49 | 614 279 2223 | BUTTON,MEMORY REPEAT |
| 50 | 614 279 2230 | BUTTON,DUBING SPEED |
| 51 | 614 279 2469 | KNOB,LEVER,MECHA(L-REC) |
| 52 | 614 279 2476 | KNOB,LEVER,MECHA(L-PLAY) |
| 53 | 614 279 2483 | KNOB,LEVER,MECHA(L-REW) |
| 54 | 614 279 2490 | KNOB,LEVER,MECHA(L-FF) |
| 55 | 614 279 2506 | KNOB,LEVER,MECHA(L-STOP) |
| 56 | 614 279 2513 | KNOB,LEVER,MECHA(L-PAUSE) |
| 57 | 614 279 2520 | KNOB,LEVER,MECHA(R-PLAY) |
| 58 | 614 279 2537 | KNOB,LEVER,MECHA(R-REW) |
| 59 | 614 279 2544 | KNOB,LEVER,MECHA(R-FF) |
| 60 | 614 279 2575 | KNOB,LEVER,MECHA(R-STOP) |
| 61 | 614 279 2582 | KNOB,LEVER,MECHA(R-PAUSE) |
| 62 | 614 283 7658 | SHAFT,C-CASSTTE LEVER |
| 63 | 614 208 0276 | LUG,LEAD MTG. |
| 64 | 614 270 8385 | HOLDER,DECK PWB FIX,UPPER |
| 65 | 614 270 8507 | SPRING,PLATE,RECORD/PLAY |
| 66 | 614 270 8378 | HOLDER,DECK PWB FIX,LEFT |
| 67 | 614 270 8392 | HOLDER,DECK PCB FIX,LOWER |
| 68 | 614 281 8800 | MOUNTING,LED,CD BUTTON |
| | 614 208 0986 | CUSHION,DECK MECHANISM LEAD 10X40MM |
| | 614 231 6832 | LABEL,SAFETY,LASER CLASS 1 |
| | 614 283 2295 | LABEL,CAUTION,SET TOP, PRESS THE OPEN/CLOSE BUTTON |
| | 614 286 4159 | LABEL,CAUTION,SHIPPING SCREW CAUTION,IMPORTANT, BEFORE USE --- |
| | 614 286 4166 | LABEL,CAUTION,SHIPPING SCREW CAUTION,BEFORE USE,FRONT |
| | 614 286 4173 | LABEL,SHIPPING SCREW GREEN ARROW |
| | 614 224 3688 | LABEL,SAFETY,LASER LABEL |
| | 412 055 5204 | SPECIAL SCREW- 3X18.5MM, SHIPPING SCREW |
| | 614 129 4971 | FIKER,LEAD MTG. |

PARTS LIST

FIXING PARTS

| Ref. No. | Part No. | Description |
|----------|--------------|---|
| Y01 | 614 270 0938 | SPECIAL SCREW 3X9MM, SIDE PANEL(L/R)/PLAYER |
| Y02 | 614 270 0938 | SPECIAL SCREW 3X9MM, SIDE PANEL(L/R)/PLAYER |
| Y03 | 411 028 2905 | SCR S-TPG PAN 2X4MM, JOINT FIX, CD MECHANISM |
| Y04 | 411 021 6405 | SCR S-TPG BIN 3X8MM, CD MECHANISM-HL MECHA |
| Y05 | 411 021 6405 | SCR S-TPG BIN 3X8MM, CD MECHA-HL MECHA |
| Y06 | 411 021 3503 | SCR S-TPG BIN 3X10MM, CD MECHA-FRONT.P |
| Y07 | 411 021 6405 | SCR S-TPG BIN 3X8MM, CD BR-CD MECHA |
| Y08 | 411 027 3101 | SCR S-TPG BIN 3X8MM, CD PWB-CD BARCKET |
| Y09 | 411 021 6405 | SCR S-TPG BIN 3X8MM, BTM-AMP PWB |
| Y10 | 411 021 6405 | SCR S-TPG BIN 3X8MM, BTM-H (HEAT SINK) |
| Y11 | 411 021 3503 | SCR S-TPG BIN 3X10MM, TUNER-BR/REAR |
| Y12 | 411 021 3503 | SCR S-TPG BIN 3X10MM, REAR/BTM/PLAYER |
| Y13 | 411 021 3503 | SCR S-TPG BIN 3X10MM, REAR-MECHA(CD) |
| Y14 | 411 001 4209 | SCR S-TPG BIN 4X8MM, POWER TRANSFORMER |
| Y15 | 411 021 6405 | SCR S-TPG BIN 3X8MM, TUNER,BRACKET-PWB |
| Y16 | 411 021 6405 | SCR S-TPG BIN 3X8MM, BOTTOM LUG |
| Y17 | 411 021 6405 | SCR S-TPG BIN 3X8MM, REAR-ELCTRICAL PARTS |
| Y18 | 411 020 8905 | SCR S-TPG BRZ+FLG 3X10MM, BTM-P, FRONT(SIDE BOTTOM) |
| Y21 | 411 021 3503 | SCR S-TPG BIN 3X10MM, FRONT PWB-CLOCK/TIMER PWB |
| Y23 | 411 021 3503 | SCR S-TPG BIN 3X10MM, L-PWB |
| Y24 | 411 021 3503 | SCR S-TPG BIN 3X10MM, R-PWB |
| Y25 | 412 032 6408 | SPECIAL SCREW, PHONES SOCKET PWB |
| Y26 | 412 032 6408 | SPECIAL SCREW, SHAFT-LEVER |
| Y27 | 411 020 8905 | SCR S-TPG BRZ+FLG 3X10MM, SHAFT-CENTER |
| Y28 | 411 021 3503 | SCR S-TPG BIN 3X10MM, OPEN/CLOSE BUTTON |
| Y29 | 411 098 4700 | SCR S-TPG BIN 2.3X8MM, DEC.W-PNAEL F |
| Y30 | 411 028 2905 | SCR S-TPG PAN 2X4MM, DECK BRACKET-E |
| Y31 | 411 021 3503 | SCR S-TPG BIN 3X10MM, C-MECHA |
| Y32 | 411 028 2905 | SCR S-TPG PAN 2X4MM, R/P SPRING PLATE |
| Y33 | 411 028 2905 | SCR S-TPG PAN 2X4MM, DECK BRACKET-E |
| Y34 | 411 028 2905 | SCR S-TPG PAN 2X4MM, DECK BRACKET-E |
| Y35 | 411 021 6405 | SCR S-TPG BIN 3X8MM, DECK PWB |
| Y36 | 412 032 6408 | SPECIAL SCREW, C-CASSTTE DAMPER |
| Y37 | 411 021 1400 | SCR S-TPG BIN 2.3X10MM, DEC.W-CD LID |

ELECTRICAL PARTS

| Ref. No. | Part No. | Description |
|----------|---------------|--------------------------------|
| 71 | △614 244 5815 | POWER CORD,AC |
| or | △614 245 1472 | POWER CORD,AC |
| or | △645 005 7120 | CORD,POWER,AC |
| or | △645 008 9732 | CORD,POWER,AC |
| 72 | △423 016 9902 | FUSE 250V 0.8A (FU471) |
| 73 | △645 010 0871 | TRANSFORMER,POWER (T4701) |
| CN267 | 614 129 9099 | LUG,MECHANISM-BOTTOM |
| | 645 020 6849 | FLEXIBLE FLAT CABLE, FRONT-AMP |
| CN268 | 645 020 6825 | FLEXIBLE FLAT CABLE,CD-FRONT |
| CN269 | 645 011 3093 | FLEXIBLE FLAT CABLE,CD-FRONT |
| CN270 | 645 020 6832 | FLEXIBLE FLAT CABLE |
| CN490 | 614 286 3091 | CORD,3P CONNECTOR |
| E2101 | 614 274 2013 | CORD,1P CONNECTOR,FM ANT |

TUNER P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|---------------------------|
| 81 | 614 280 8931 | ASSY,PWB,TUNER |
| C2152 | 403 082 0201 | POLYPRO 470P J 100V |
| C2155 | 403 082 2205 | POLYPRO 560P J 100V |
| C2457 | 403 106 1603 | NP-ELECT 1U Q 50V |
| CN201 | 645 004 2683 | PLUG,2P |
| CN202 | 645 011 9965 | SOCKET,FPC 9P |
| CN203 | 614 221 8273 | TERMINAL,1P |
| or | 614 254 3597 | TERMINAL,1P |
| CT251 | 645 004 2317 | TRIMMER,30PF |
| or | 645 017 2694 | TRIMMER,30PF |
| CT252 | 614 007 6356 | TRIMMER,10PF |
| or | 645 017 2687 | TRIMMER,10PF |
| D2100 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2101 | 407 157 8109 | DIODE SVC211-B |
| D2102 | 407 157 8109 | DIODE SVC211-B |
| D2103 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2151 | 407 091 5004 | VARACTOR DI SVC321SPA-C-2 |
| D2152 | 407 091 5004 | VARACTOR DI SVC321SPA-C-2 |
| D2451 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2454 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2455 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2456 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2461 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2463 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2465 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D2466 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| IC211 | 409 292 5807 | IC TA8176SN |
| IC231 | 409 379 2705 | IC LA1832ML |
| IC245 | 409 378 4205 | IC LC72131MD |
| L2101 | 614 034 5988 | VHF COIL |
| L2103 | 645 002 1534 | INDUCTOR,8.2U K |
| L2151 | 614 255 5798 | TRANS,RF |
| L2152 | 614 255 5781 | TRANS,RF |
| L2153 | 614 255 5767 | TRANS,OSC |
| L2154 | 614 255 5774 | TRANS,OSC |
| L2301 | 645 004 0580 | INDUCTOR,1M J |
| L2451 | 645 001 4581 | INDUCTOR,100U K |
| LG201 | 614 051 9785 | LUG |
| Q2101 | 405 016 0806 | TR 2SC2839-E |
| Q2152 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q2153 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q2154 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q2155 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q2156 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q2157 | 405 026 9004 | TR 2SK222-D |
| Q2305 | 405 000 0904 | TR DTA114YS |
| or | 405 036 3702 | TR 2SA1564 |
| Q2310 | 405 016 0806 | TR 2SC2839-E |
| Q2451 | 405 000 0904 | TR DTA114YS |
| or | 405 036 3702 | TR 2SA1564 |
| Q2452 | 405 000 0904 | TR DTA114YS |
| or | 405 036 3702 | TR 2SA1564 |
| Q2453 | 405 000 0904 | TR DTA114YS |
| or | 405 036 3702 | TR 2SA1564 |
| X2301 | 645 010 0024 | OSC,CERAMIC 456KHZ |
| or | 614 246 0870 | RESONATOR |
| X2451 | 614 229 2457 | CRYSTAL,7.2MHZ |
| or | 614 240 1118 | RESONATOR,7.2MHZ |
| or | 614 204 0317 | CRYSTAL |
| XF211 | 614 252 1045 | FILTER,LC,FM |
| XF221 | 614 231 0199 | FILTER,FM |
| or | 614 030 5074 | I.F FILTER,FM |
| XF222 | 614 231 0199 | FILTER,FM |
| or | 614 030 5074 | I.F FILTER,RED,FM |
| XF231 | 614 246 0849 | FILTER,450KHZ |
| XF233 | 645 012 0138 | DISCR,CERAMIC,10.75MHZ |
| or | 645 012 0374 | DISCR,CERAMIC,10.75MHZ |
| or | 645 012 2804 | DISCR,CERAMIC,10.75MHZ |
| or | 645 012 2811 | DISCR,CERAMIC,10.75MHZ |

PARTS LIST

| Ref. No. | Part No. | Description |
|----------|--------------|-----------------|
| D2464 | 407 007 9904 | DIODE GMA01</td |

PARTS LIST

| Ref. No. | Part No. | Description |
|----------|---------------|------------------|
| Q4601 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4602 | 405 021 0600 | TR 2SD1012-G-SPA |
| Q4603 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4604 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4605 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4701 | 405 031 4506 | TR 2SA733-R |
| or | 405 005 1906 | TR 2SA733-K |
| or | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| or | 405 005 2101 | TR 2SA733-Q |
| Q4702 | 405 031 4506 | TR 2SA733-R |
| or | 405 005 1906 | TR 2SA733-K |
| or | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| or | 405 005 2101 | TR 2SA733-Q |
| Q4703 | △405 095 1602 | TR 2SD2061-E |
| or | △405 095 1701 | TR 2SD2061-F |
| Q4704 | △405 095 1602 | TR 2SD2061-E |
| or | △405 095 1701 | TR 2SD2061-F |
| Q4705 | △405 095 1602 | TR 2SD2061-E |
| or | △405 095 1701 | TR 2SD2061-F |
| Q4706 | 405 031 4506 | TR 2SA733-R |
| or | 405 005 1906 | TR 2SA733-K |
| or | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| or | 405 005 2101 | TR 2SA733-Q |
| Q4707 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4708 | △405 095 1602 | TR 2SD2061-E |
| or | △405 095 1701 | TR 2SD2061-F |
| Q4709 | 405 023 5306 | TR 2SD400-F-MP |
| Q4710 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4711 | △405 095 1602 | TR 2SD2061-E |
| or | △405 095 1701 | TR 2SD2061-F |
| Q4712 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |
| Q4713 | 405 000 3806 | TR DTC114YS |
| or | 405 128 9001 | TR RN1207 |
| or | 405 037 0809 | TR 2SC4048 |
| Q4714 | 405 000 3806 | TR DTC114YS |
| or | 405 128 9001 | TR RN1207 |
| or | 405 037 0809 | TR 2SC4048 |
| Q4715 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 014 5209 | TR 2SC2458-GR |
| or | 405 014 5407 | TR 2SC2458-Y |

POWER TRANSFORMER,PRIMARY P.W.B. ASSY

| Ref. No. | Part No. | Description |
|----------|---------------|------------------------------------|
| 83 | 614 280 6760 | ASSY,PWB,POWER TRANSFORMER,PRIMARY |
| CN493 | 645 006 4760 | HOLDER,FUSE |
| CN494 | 645 006 4760 | HOLDER,FUSE |
| CN495 | 614 017 8203 | TERMINAL BOARD |
| CN496 | 614 017 8203 | TERMINAL BOARD |
| L4930 | △614 213 5761 | INDUCTOR,FERITE |

POWER TRANSFORMER,SECONDARY P.W.B. ASSY

| Ref. No. | Part No. | Description |
|----------|---------------|--------------------------------------|
| 84 | 614 280 6777 | ASSY,PWB,POWER TRANSFORMER,SECONDARY |
| CN499 | 645 004 2720 | PLUG,6P |
| R4990 | △402 071 9508 | FUSIBLE RES 1 JA 1/4W |

TAPE DECK P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|------------------------|
| 85 | 614 281 3461 | ASSY,PWB,TAPE DECK |
| C3303 | 403 058 9108 | POLYESTER 0.018U J 50V |
| C3304 | 403 058 1102 | POLYESTER 1500P K 50V |
| CN301 | 645 005 8141 | PLUG,9P |
| CN302 | 645 005 9292 | PLUG,5P |
| CN303 | 645 004 2911 | PLUG,5P |
| CN304 | 645 004 2898 | PLUG,3P |
| CN306 | 614 020 6562 | SOCKET,4P |
| or | 614 223 9223 | SOCKET,4P |
| CN371 | 645 005 8110 | PLUG,4P |
| CN372 | 645 006 0861 | PLUG,7P |
| CN373 | 645 005 7373 | PLUG,3P |

PARTS LIST

| Ref. No. | Part No. | Description |
|----------|--------------|----------------------|
| D3101 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3102 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3103 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3104 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3109 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3110 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3111 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3112 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3113 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3114 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| or | 407 012 5809 | DIODE 1SS176 |
| or | 407 153 6109 | DIODE 1SS119-041 |
| D3301 | 407 053 8807 | ZENER DIODE MTZ9.1B |
| IC351 | 409 270 2101 | IC HA12136AT |
| or | 409 199 1209 | IC HA12136A |
| IC370 | 409 121 8702 | IC LA3246 |
| IC371 | 409 207 1900 | IC MLC4066B |
| or | 409 003 9506 | IC BU4066B |
| or | 409 051 3501 | IC TC4066BP |
| or | 409 059 2605 | IC UPD4066BC |
| IC374 | 409 214 1900 | IC CXA1298AP |
| L3300 | 614 212 0804 | TRANS,OSC(85KHZ) |
| L3501 | 614 252 4305 | FILTER,LC,MPX(85KHZ) |
| L3551 | 614 252 4305 | FILTER,LC,MPX(85KHZ) |
| L3700 | 645 004 0580 | INDUCTOR,1M J |
| L3750 | 614 029 3142 | MX COIL,TRAP(85KHZ) |
| or | 614 029 3937 | MX COIL,TRAP(85KHZ) |
| L3800 | 645 004 0580 | INDUCTOR,1M J |
| L3850 | 614 029 3142 | MX COIL,TRAP(85KHZ) |
| or | 614 029 3937 | MX COIL,TRAP(85KHZ) |
| Q3101 | 405 000 6104 | TR DTC144ES |
| or | 405 078 3005 | TR BA1L4M |
| or | 405 018 2501 | TR 2SC3399 |
| Q3102 | 405 011 8609 | TR 2SC1740S-S |
| or | | |

PARTS LIST

FRONT P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|------------------------|
| 86 | 614 280 6715 | ASSY,PWB FRONT |
| BR261 | 614 279 2414 | HOLDER,FL |
| C2643 | 403 262 8607 | DL-ELECT 0.047F Z 5.5V |
| CN261 | 645 012 5669 | SOCKET,FPC 33P |
| CN262 | 645 019 0391 | SOCKET,FPC 12P |
| CN263 | 645 019 0384 | SOCKET,FPC 8P |
| CN264 | 614 035 4911 | SOCKET,DIP 2P |
| CN265 | 614 035 4911 | SOCKET,DIP 2P |
| CN266 | 614 235 8856 | CONNECTOR-P |
| CN271 | 645 005 8226 | PLUG,3P |
| D2601 | 407 099 4603 | ZENER DIODE MTZJ3.9B |
| D2605 | 407 012 4406 | DIODE 1SS133 |
| D2606 | 408 017 5801 | LED SLZ-981C-15-AB-T2 |
| D2611 | 407 138 4700 | PHOTO DIODE SPS-420-1 |
| D2651 | 407 012 4406 | DIODE 1SS133 |
| D2701 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2702 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2703 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2704 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2705 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2706 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2707 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2708 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2709 | 408 018 2700 | LED SLZ-381B-22-AB-T2 |
| D2710 | 408 017 5801 | LED SLZ-981C-15-AB-T2 |
| D2711 | 408 017 5801 | LED SLZ-981C-15-AB-T2 |
| D2712 | 408 017 5801 | LED SLZ-981C-15-AB-T2 |
| D2713 | 408 017 5801 | LED SLZ-981C-15-AB-T2 |
| D2714 | 407 012 4406 | DIODE 1SS133 |
| D2715 | 407 012 4406 | DIODE 1SS133 |
| D4401 | 407 012 4406 | DIODE 1SS133 |
| D4402 | 407 012 4406 | DIODE 1SS133 |
| D4403 | 407 012 4406 | DIODE 1SS133 |
| D4404 | 407 012 4406 | DIODE 1SS133 |
| FL261 | 645 017 1123 | FLUORESCENT TUBE |
| IC261 | 410 267 0208 | IC M38174M8-283FP |
| IC271 | 409 159 9306 | IC M50253P |
| IC291 | 409 285 8709 | IC MC14066BD |
| IC441 | 409 133 8103 | IC NJM4558M-S |
| IC442 | 409 133 8103 | IC NJM4558M-S |
| L2601 | 645 003 5814 | INDUCTOR,100U J |
| L2901 | 645 001 4581 | INDUCTOR,100U K |
| Q2601 | 405 007 6701 | TR 2SB598-F-NP |
| or | 405 006 4005 | TR 2SA952-L |
| or | 405 006 3909 | TR 2SA952-K |
| Q2602 | 405 020 7402 | TR 2SC945A-P |
| or | 405 020 7204 | TR 2SC945A-K |
| or | 405 012 2002 | TR 2SC1815-GR |
| Q2603 | 405 007 6701 | TR 2SB598-F-NP |
| or | 405 006 4005 | TR 2SA952-L |
| or | 405 006 3909 | TR 2SA952-K |
| Q2604 | 405 020 7402 | TR 2SC945A-P |
| or | 405 020 7204 | TR 2SC945A-K |
| or | 405 012 2002 | TR 2SC1815-GR |
| Q2605 | 405 020 7402 | TR 2SC945A-P |
| or | 405 020 7204 | TR 2SC945A-K |
| or | 405 012 2002 | TR 2SC1815-GR |
| Q2606 | 405 020 7402 | TR 2SC945A-P |
| or | 405 020 7204 | TR 2SC945A-K |
| or | 405 012 2002 | TR 2SC1815-GR |
| Q2615 | 405 020 7402 | TR 2SC945A-P |
| or | 405 020 7204 | TR 2SC945A-K |
| or | 405 012 2002 | TR 2SC1815-GR |

CLOCK/TIMER P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|-----------------------------|
| 87 | 614 280 6722 | ASSY,PWB,CLOCK/TIMER |
| CN283 | 614 035 4911 | SOCKET,DIP 2P |
| S2831 | 645 006 5958 | SWITCH,PUSH 1P-1T,SET/CLEAR |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2832 | 645 006 5958 | SWITCH,PUSH 1P-1T,ADJUST |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2833 | 645 006 5958 | SWITCH,PUSH 1P-1T,TIMER |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2834 | 645 006 5958 | SWITCH,PUSH 1P-1T,CLOCK |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |

PARTS LIST

CD OPERATION P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|-----------------------------------|
| 88 | 614 280 8948 | ASSY,PWB,CD OPERATION |
| CN284 | 614 035 4911 | SOCKET,DIP 2P |
| S2841 | 645 006 5958 | SWITCH,PUSH 1P-1T,OPEN/CLOSE |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2842 | 645 006 5958 | SWITCH,PUSH 1P-1T,STOP |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2843 | 645 006 5958 | SWITCH,PUSH 1P-1T,PLAY/PAUSE |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2844 | 645 006 5958 | SWITCH,PUSH 1P-1T,SKIP/SEARCH (+) |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2845 | 645 006 5958 | SWITCH,PUSH 1P-1T,SKIP/SEARCH (-) |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2846 | 645 006 5958 | SWITCH,PUSH 1P-1T,SPEED |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2847 | 645 006 5958 | SWITCH,PUSH 1P-1T,DOLBY |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2848 | 645 006 5958 | SWITCH,PUSH 1P-1T,DISC CHECK |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |

REPEAT/MEMORY SWITCH P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|------------------------------|
| 89 | 614 280 8955 | ASSY,PWB,REPEAT/MEMORY |
| CN286 | 614 235 9129 | CONNECTOR-S,6P |
| S2852 | 645 006 5958 | SWITCH,PUSH 1P-1T,MEMORY |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2822 | 645 006 5958 | SWITCH,PUSH 1P-1T,DISC 2 |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2823 | 645 006 5958 | SWITCH,PUSH 1P-1T,DISC 3 |
| or | 614 220 5471 | SWITCH,TACT |
| or | 614 240 1002 | SWITCH,TACT |
| S2881 | 645 017 2991 | SWITCH,ROTARY(ENCODER) |
| VR280 | 614 249 9238 | VOLUME |
| X2600 | 645 013 7532 | VR,ROTARY,100K OHM B,BALANCE |
| X2601 | 614 252 7627 | OSC,CERAMIC 4.19MHZ |
| | | RESONATOR,XTAL,32.768KHZ |

PHONES SOCKET P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|-------------------------|
| 90 | 614 281 2952 | ASSY,PWB,PHONES SOCKET |
| CN491 | 614 020 6579 | SOCKET,5P |
| or | 614 223 9230 | SOCKET,5P |
| CN492 | 645 006 1141 | JACK,PHONE D6.43,PHONES |
| CN493 | 614 285 7830 | CORD,5P CONNECTOR |
| L4591 | 614 212 3171 | INDUCTOR,FERITE |
| or | 645 006 9864 | INDUCTOR,80U |
| L4691 | 614 212 3171 | INDUCTOR,FERITE |
| or | 645 006 9864 | INDUCTOR,80U |

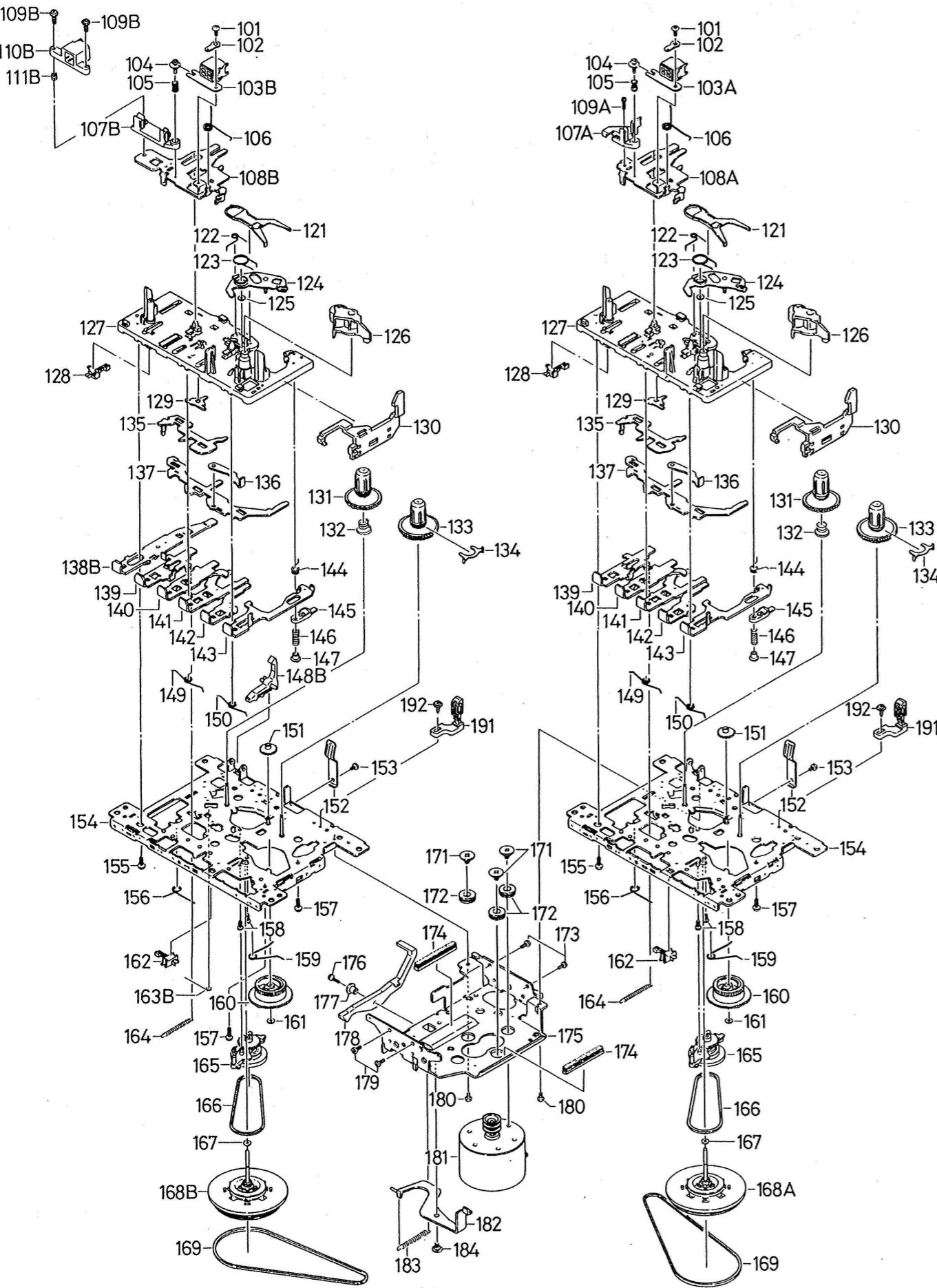
CD MAIN P.W.BOARD ASSY

| Ref. No. | Part No. | Description |
|----------|--------------|--------------------------|
| 91 | 614 284 8258 | ASSY,PWB,CD |
| CN101 | 645 006 0915 | PLUG,4P, TP1-4 |
| or | 645 009 6440 | PLUG,4P, TP1-4 |
| CN111 | 645 010 1472 | SOCKET,FPC 13P,CD_PICKUP |

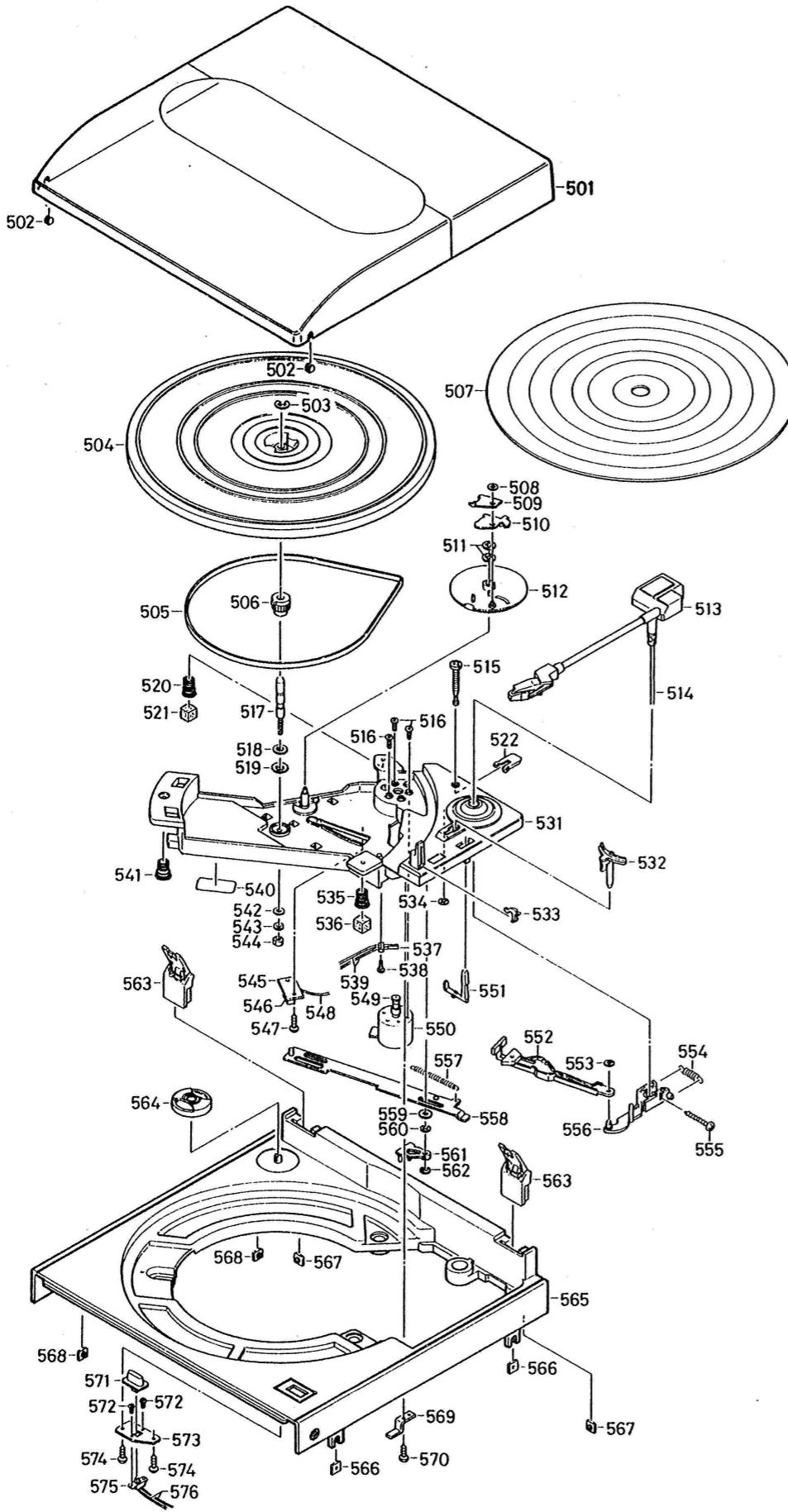
| Ref. No. | Part No. | Description |
| --- | --- | --- |

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EXPLODED VIEW (TAPE MECHANISM)



EXPLODED VIEW (TURNTABLE MECHANISM)

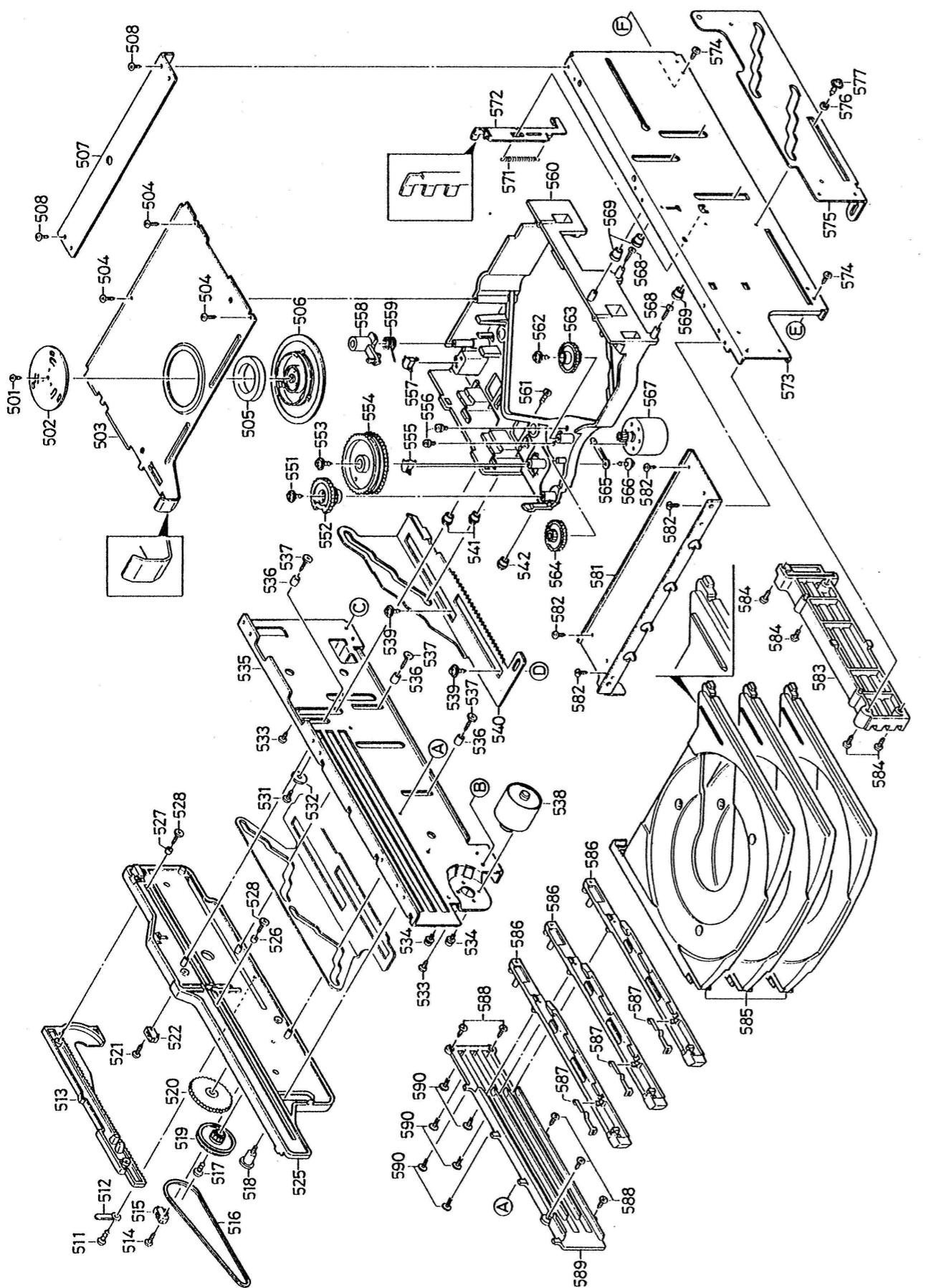


PARTS LIST

TURNTABLE MECHANISM (PL - DL670)

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--------------------------------------|----------|--------------|-------------------------------------|
| 501 | 645 007 0662 | DUST COVER | 541 | 645 007 0587 | SPRING,FLOATING |
| 502 | 645 007 0594 | CUSHION,DUST COVER | 542 | 645 007 0495 | WASHER,SPINDLE FIX |
| 503 | 645 007 0471 | 6MM E RING,TURN TABLE RETAINER | 543 | 645 007 0907 | WASHER,SPINDLE FIX |
| 504 | 645 007 0686 | TURNTABLE,PLATTER | 544 | 645 007 0532 | NUT,SPINDLE FIX |
| 505 | 645 007 0402 | BELT,TURN TABLE | 545 | 645 007 0549 | P.C.BOARD,TURNTABLE |
| 506 | 645 007 0693 | GEAR,TURN TABLE | 546 | 645 007 0419 | CONNECTOR |
| 507 | 645 007 0600 | RUBBER MAT,TURN TABLE | 547 | 645 007 0372 | SCREW |
| 508 | 645 007 0297 | 3MM CS RING,CLUTCH PLATE RETAINER | 548 | 645 007 0884 | WIRE |
| 509 | 645 007 0358 | CLUTCH PLATE UPPER,TRIP PAWL | 549 | 645 007 0457 | PULLEY MOTOR |
| 510 | 645 007 0310 | CLUTCH PLATE COVER,TRIP CLUTCH PLATE | 550 | 645 007 0525 | MOTOR |
| 511 | 645 007 0303 | 4MM CS RING,CAM GEAR RETAINER | 551 | 645 007 0815 | LEVER,CUEING |
| 512 | 645 007 0341 | SPUR GEAR,CAM GEAR | 552 | 645 007 0778 | SLIDE,PLATE RETURN,TRIP LEVER |
| 513 | 645 008 7158 | A TONE ARM ASSY | 553 | 645 007 0297 | 3MM CS RING |
| A | 614 225 9115 | B TONE ARM ASSY | 554 | 645 007 0655 | SPRING,ARM LEVER SPRING |
| B | 614 001 7779 | NEEDLE CARTRIDGE,STYLUS,ST-707J | 555 | 645 007 0747 | SCREW,AUTO RETURN ADJUSTMENT |
| 514 | 645 007 0280 | TIE,TONE ARM | 556 | 645 007 0617 | LINK RETURN,ARM LEVER |
| 515 | 645 007 0754 | SCREW,5MM, SHIPPING | 557 | 645 007 0334 | SPRING,CAM SLIDE PULL SPRING |
| 516 | 645 007 0761 | SCREW,MOTOR FIX | 558 | 645 007 0396 | LEVER RETURN,CAM SLIDE |
| 517 | 645 007 0716 | SPINDLE,SPINDLE SHAFT | 559 | 645 007 0501 | WASHER |
| 518 | 645 007 0914 | WASHER,TURN TABLE THRUST | 560 | 645 007 0464 | 3 MM,E RING |
| 519 | 645 007 0709 | OIL CUP | 561 | 645 007 0556 | SHUT OFF PLATE SWITCH |
| 520 | 645 007 0563 | SPRING,FLOATING | 562 | 645 007 0464 | 3MM E RING, |
| 521 | 645 007 0679 | SPONGE,FLOATING | 563 | 645 007 0860 | SHUT OFF PLATE RETAINER |
| 522 | 645 007 0853 | CLIP,USE FOR SHIPPING | 564 | 645 007 0792 | HING PLASTIC,HING |
| 531 | 645 007 0433 | CHASSIS | 565 | 645 007 0440 | ADAPTER,45 ADAPTER |
| 532 | 645 007 0365 | TONE ARM ELEVATOR | 566 | 645 008 8902 | WELL |
| 533 | 645 007 0822 | ARM CLIP | 567 | 645 008 8902 | FIX PLATE |
| 534 | 645 007 0297 | 3MM CS RING | 568 | 645 008 8902 | FIX PLATE |
| 535 | 645 007 0570 | SPRING,FLOATING | 569 | 645 007 0389 | FIX PLATE |
| 536 | 645 007 0679 | SPONGE,FLOATING | 570 | 645 007 0372 | IRON PLATE, |
| 537 | 645 007 0846 | SWITCH,AUTO SHUT-OFF SWITCH | 571 | 645 007 0785 | FLOATING UPPER STOPPER |
| 538 | 645 007 0730 | SCREW,SWITCH FIX | 572 | 645 007 0723 | SCREW,PART FIX |
| 539 | 645 007 0877 | WIRE | 573 | 645 007 0808 | BUTTER,SPEED SWITCH NOB |
| 540 | 645 007 0518 | LABEL | 574 | 645 007 0372 | SCREW,SPEED SWITCH FIX |
| | | | 575 | 645 007 0839 | SCREW, SPEED BRACKET,SWITCH BRACKET |
| | | | 576 | 645 007 0891 | SCREW |
| | | | | 645 007 0488 | SLIDE SWITCH,SPEED SELECT |
| | | | | | WIRE |
| | | | | | EVA |

EXPLODED VIEW (CD CHANGER MECHANISM)

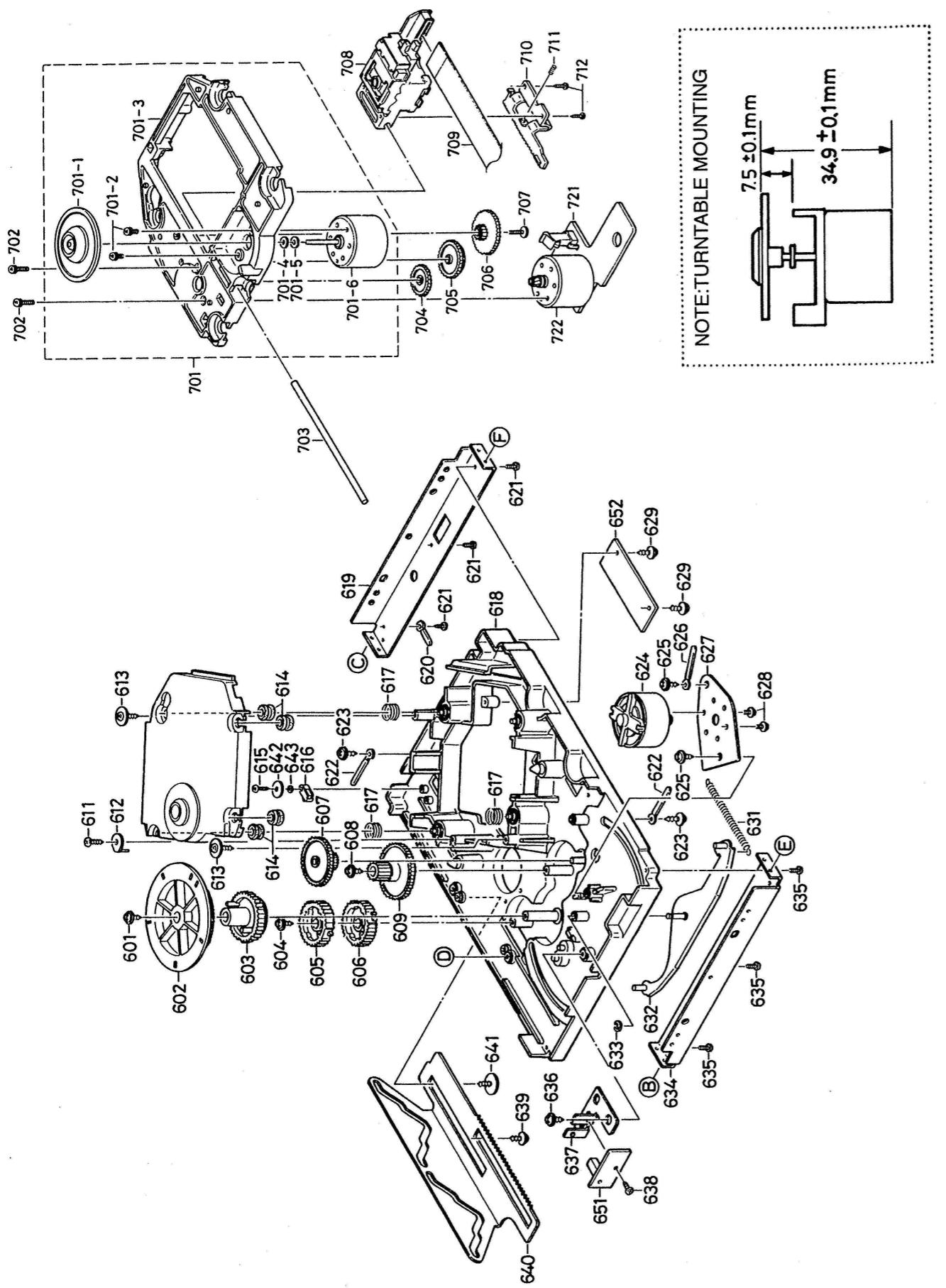


PARTS LIST

CD CHANGER MECHANISM (PM-CD96CHN11/SH)

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|---|----------|--------------|---|
| 501 | 411 022 7500 | SCR S-TPG PAN 2X4MM, CHUCK PULLEY FIX | 561 | 411 022 8408 | SCR S-TPG PAN 2X8MM, TRAY HOLDER |
| 502 | 614 266 8061 | HOLDER,CHUCK PLATE PULLEY | 562 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX |
| 503 | 614 286 3329 | HOLDER,CHUCK BRACKET | 563 | 614 266 8030 | GEAR,LOAD/UNLOAD IDLER1 |
| 504 | 411 022 7807 | SCR S-TPG PAN 2X6MM, CHUCK BRACKET FIX | 564 | 614 266 1796 | GEAR,LOAD/UNLOAD IDLER2 |
| 505 | 645 009 9809 | MAGNET CHUCK,CHUCKING | 565 | 614 129 9136 | LUG,LEAD MTG. |
| 506 | 614 272 1674 | ASSY,PULLEY,CHUCK | 566 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, LUG FIX |
| 507 | 614 266 1918 | JOINT,B-TOP ENCOURAGER | 567 | 645 009 1193 | ASSY,MOTOR,LOAD/UNLOAD |
| 508 | 411 028 2905 | SCR S-TPG PAN 2X4MM, JOINT FIX | 568 | 411 022 8408 | SCR S-TPG PAN 2X8MM, TRAY HOLDER |
| 511 | 411 021 0809 | SCR S-TPG BIN 2X6MM,LUG FIX | 569 | 614 268 0469 | PIPE,TRAY HOLDER GUIDE |
| 512 | 614 129 9341 | LUG,OPEN/CLOSE SWITCH LOAD | 571 | 614 268 0162 | SPRING,TENSION,STOPPER PULL |
| 513 | 614 266 1833 | GEAR,OPEN/CLOSE RACK | 572 | 614 279 0595 | STOPPER,DISC STOPPER |
| 514 | 411 021 1202 | SCR S-TPG BIN 2X8MM, OPEN/CLOSE SW FIX | 573 | 614 266 1956 | Mounting,RIGHT SIDE BRAKET |
| 515 | 645 010 6491 | SWITCH,LEVER,OPEN END | 574 | 411 028 2905 | SCR S-TPG PAN 2X4MM, Mounting FIX |
| 516 | 614 277 6896 | BELT,SQUARE,OPEN/CLOSE | 575 | 614 268 2906 | ASSY,SLIDE,RIGHT |
| 517 | 411 021 2704 | SCR S-TPG BIN 2.6X6MM, PULLEY FIX | 576 | 614 270 2239 | PIPE,RIGHT SLIDE GUIDE |
| 518 | 412 004 5705 | SPECIAL SCREW,GEAR BLOCK FIX | 577 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, RIGHT SLIDE FIX |
| 519 | 614 277 7312 | PULLEY,OPEN/CLOSE IDLER PULLEY | 581 | 614 266 1901 | JOINT,F-TOP ENCOURAGER |
| 520 | 614 266 1826 | GEAR,OPEN/CLODE IDLER | 582 | 411 028 2905 | SCR S-TPG PAN 2X4MM, JOINT FIX |
| 521 | 411 021 1202 | SCR S-TPG BIN 2X8MM, OPEN/CLOSE SW FIX | 583 | 614 286 3343 | HOLDER,RIGHT,TRAY GUIDE |
| 522 | 645 010 6491 | SWITCH,LEVER,CLOSE END | 584 | 411 028 3100 | SCR S-TPG PAN 2X6MM, HOLDER FIX |
| 525 | 614 266 1970 | MOUNTING,GEAR BLOCK BRACKET | 585 | 614 286 3312 | ASSY,TRAY |
| 526 | 614 273 5992 | PIPE,GEAR RACK GUIDE(F) | 586 | 614 286 3541 | ASSY,HOLDER |
| 527 | 614 270 2222 | PIPE,GEAR RACK GUIDE(R) | 587 | 614 266 8924 | SPRING,PLATE,TRAY HOLD |
| 528 | 412 054 6202 | SPECIAL SCREW,2X7.5MM, GEAR RACK FIX | 588 | 411 028 2905 | SCR S-TPG PAN 2X4MM, HOLDER FIX |
| 531 | 411 022 7807 | SCR S-TPG PAN 2X6MM, TRAY HOLDER | 589 | 614 286 3336 | HOLDER,LEFT,TRAY GUIDE |
| 532 | 411 091 9702 | WASHER V 2X8X0.5MM | 590 | 412 055 5303 | SPECIAL SCREW 2X6MM, HOLDER FIX |
| 533 | 411 028 2905 | SCR S-TPG PAN 2X4MM, MOUNTING FIX | 601 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX |
| 534 | 411 044 7007 | SCR PAN+SW 2X3MM, OPEN/CLOSE MOTOR FIX | 602 | 614 266 1758 | GEAR,UP/DOWN CAM (1) |
| 535 | 614 266 1949 | MOUNTING,LEFT SIDE BRACKET | 603 | 614 266 1765 | GEAR,UP/DOWN CAM (2) |
| 536 | 614 268 0476 | PIPE,OPEN/CLOSE BRAKET GUIDE | 604 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX |
| 537 | 412 054 6202 | SPECIAL SCREW,2X7.5MM, MOUNTING FIX | 605 | 614 266 1772 | GEAR,UP/DOWN DRIVE (1) |
| 538 | 645 009 1186 | ASSY,MOTOR,OPEN/COSE | 606 | 614 266 1789 | GEAR,UP/DOWN DRIVE (2) |
| 539 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM,SLIDE FIX | 607 | 614 266 1734 | GEAR,UP/DOWN IDLER 1 |
| 540 | 614 266 1994 | SLIDE,TRAY HOLDER | 608 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX |
| 541 | 614 277 9460 | PIPE,TRAY HOLDER GUIDE | 609 | 614 266 1741 | GEAR,UP/DOWN IDLER 2 |
| 542 | 614 268 0469 | PIPE,TRAY HOLDER GUIDE (R) | 611 | 411 020 9902 | SCR S-TPG BRZ+FLG |
| 551 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX | 612 | 614 267 6998 | 3X8MM,HOLDER FIX |
| 552 | 614 266 1819 | GEAR,LOAD/UNLOAD DRIVE | 613 | 614 279 1202 | HOLDER,BASE MECHANISM FIX |
| 553 | 411 098 8807 | SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX | 614 | 614 237 7031 | SPECIAL SCREW,BLACK, |
| 554 | 614 266 1802 | GEAR,LOAD/UNLOAD CAM | or | 614 277 1952 | BASE MECHANISM FIX |
| 555 | 645 012 5904 | SWITCH,UNLOAD END | 615 | 411 021 1202 | CUSHION,RUBBER,FLOATING |
| 556 | 411 044 7205 | SCR PAN+SW 2X4MM, LOAD/UNLOAD MTR FIX | 616 | 645 010 6491 | CUSHION,RUBBER,FLOATING |
| 557 | 645 012 5904 | SWITCH,LOAD END | 617 | 614 247 4907 | PLAY SW FIX |
| 558 | 614 266 1932 | LEVER,LOCK | 618 | 614 266 1727 | SPRING,COMP,FLOATING |
| 559 | 614 268 0186 | SPRING,WIRE, LOAD/UN-LOAD LOCK LEVER | 619 | 614 266 1888 | CHASSIS,BOTTOM CHASSIS |
| 560 | 614 266 1963 | MOUNTING,TRAY HOLDER | 620 | 614 129 9341 | JOINT,BOTTOM BACK LUG,OPEN/CLOSE SWITCH LEAD |

EXPLODED VIEW (CD CHANGER & BASE MECHANISM)



PARTS LIST

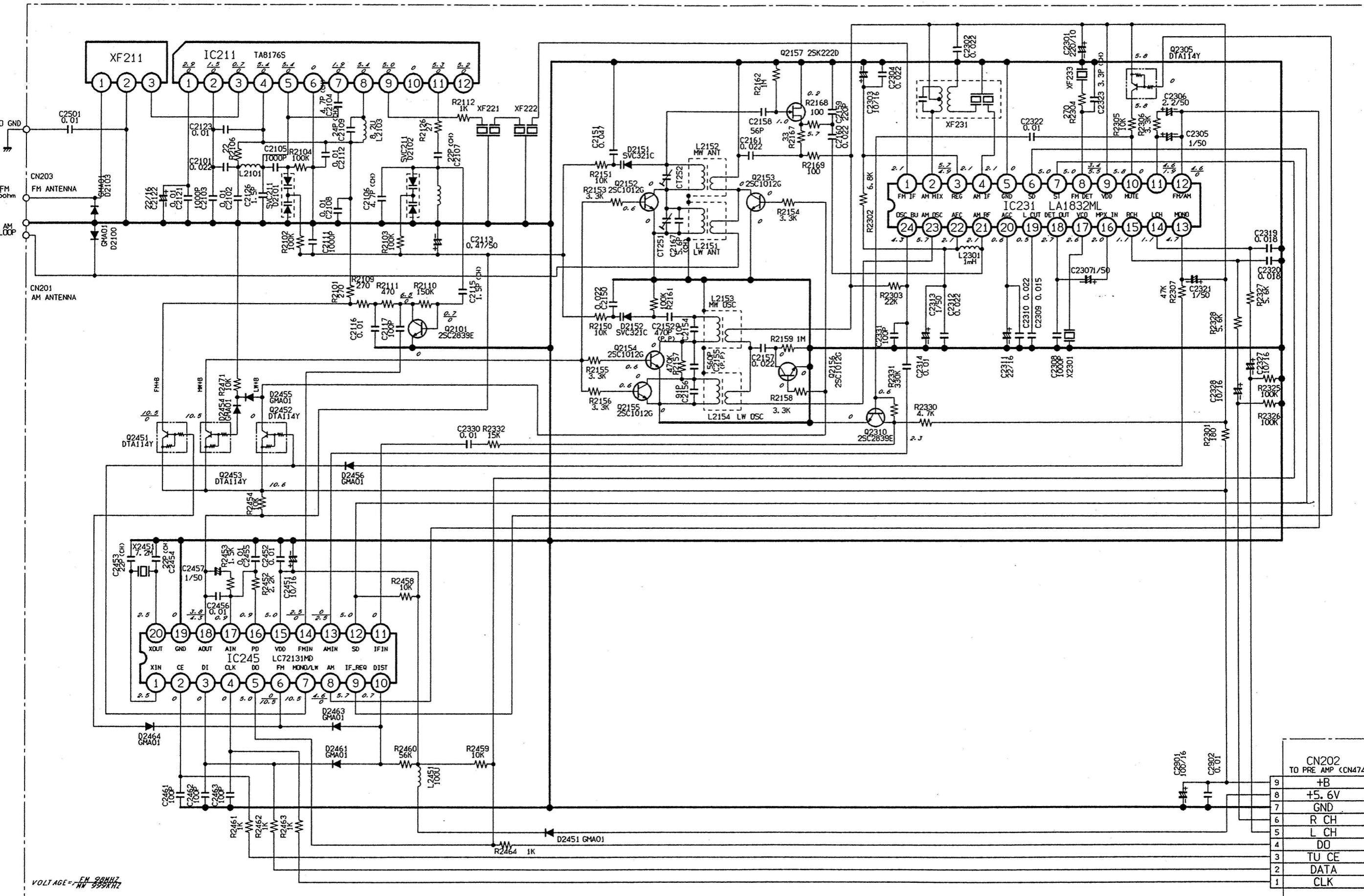
| CD CONNECTOR P.W.BOARD ASSY | | |
|-----------------------------|--------------|--------------------------------------|
| Ref. No. | Part No. | Description |
| 652 | 614 267 6646 | ASSY, PWB, CD, CONNECTOR, CHANGER |
| CN191 | 645 006 0915 | PLUG, 4P, LOAD/UNLOAD SWITCH |
| CN192 | 645 009 6440 | PLUG, 4P, LOAD/UNLOAD SWITCH |
| | 645 004 2706 | PLUG, 4P, LOAD/UNLOAD, UP/DOWN MOTOR |
| or | 645 014 9825 | PLUG, 4P, LOAD/UNLOAD, UP/DOWN MOTOR |
| CN193 | 645 006 0939 | PLUG, 6P, OPEN/CLOSE/PLAY SWITCH |
| or | 645 009 6464 | PLUG, 6P, OPEN/CLOSE/PLAY SWITCH |
| CN194 | 645 006 0922 | PLUG, 5P, SENSOR, UP/DOWN MOTOR |
| or | 645 009 6457 | PLUG, 5P, SENSOR, UP/DOWN MOTOR |
| CN195 | 645 006 0915 | PLUG, 4P, CD, PWB |
| or | 645 009 6440 | PLUG, 4P, CD, PWB |
| CN196 | 645 006 0953 | PLUG, 8P, CD, PWB |
| or | 645 009 6488 | PLUG, 8P, CD, PWB |

| CD BASE MECHANISM (PM-CDBM94D2SH) | | |
|-----------------------------------|--------------|---|
| Ref. No. | Part No. | Description |
| 701 | 614 270 2031 | ASSY, CHASSIS, BASE MECHANISM |
| 701-1 | 614 268 3354 | ASSY, TURNTABLE, SPINDLE |
| 701-2 | 411 044 7502 | SCR PAN+SW 2X5MM, SPINDLE MOTOR FIX |
| 701-3 | 614 262 2582 | CHASSIS, BASE MECHANISM |
| 701-4 | 412 032 0208 | SPECIAL WASHER, 1.9X5X0.3MM |
| 701-5 | 412 014 5603 | SPECIAL WASHER, TURNTABLE STOPPER |
| 701-6 | 645 007 7821 | MOTOR, CD-SPINDLE DC 0.2W, SPINDLE MOTOR |
| 702 | 411 044 8004 | SCR PAN+SW 2X8MM, SLED MOTOR FIX |
| 703 | 614 237 7024 | SHAFT, PICK-UP RAIL |
| or | 614 277 8029 | SHAFT, PICK-UP RAIL |
| 704 | 614 237 7093 | GEAR, SLED RETARD GEAR 1 |
| 705 | 614 237 7109 | GEAR, SLED RETARD GEAR 2 |
| 706 | 614 237 7116 | GEAR, SLED |
| 707 | 412 047 3904 | SPECIAL SCREW 2X8MM, SLED GEAR FIX |
| 708 | 645 006 7983 | PICKUP, LASER, SF-P100 |
| 709 | 645 009 9960 | FLEXIBLE FLAT CABLE, 13P, PICK-UP |
| 710 | 614 262 2599 | GEAR, RACK PICK-UP RACK GEAR |
| 711 | 614 238 6934 | SPRING, COMP, PICK-UP RACK GEAR |
| 712 | 411 152 4301 | SCR S-TPG PAN PCS 1.7X6MM, PICK RACK GEAR FIX |
| 722 | 645 007 7814 | ASSY, MOTOR CD-SLED |
| | 614 287 2796 | ASSY, CONNECTOR-S, 6P, BASE MECHANISM |

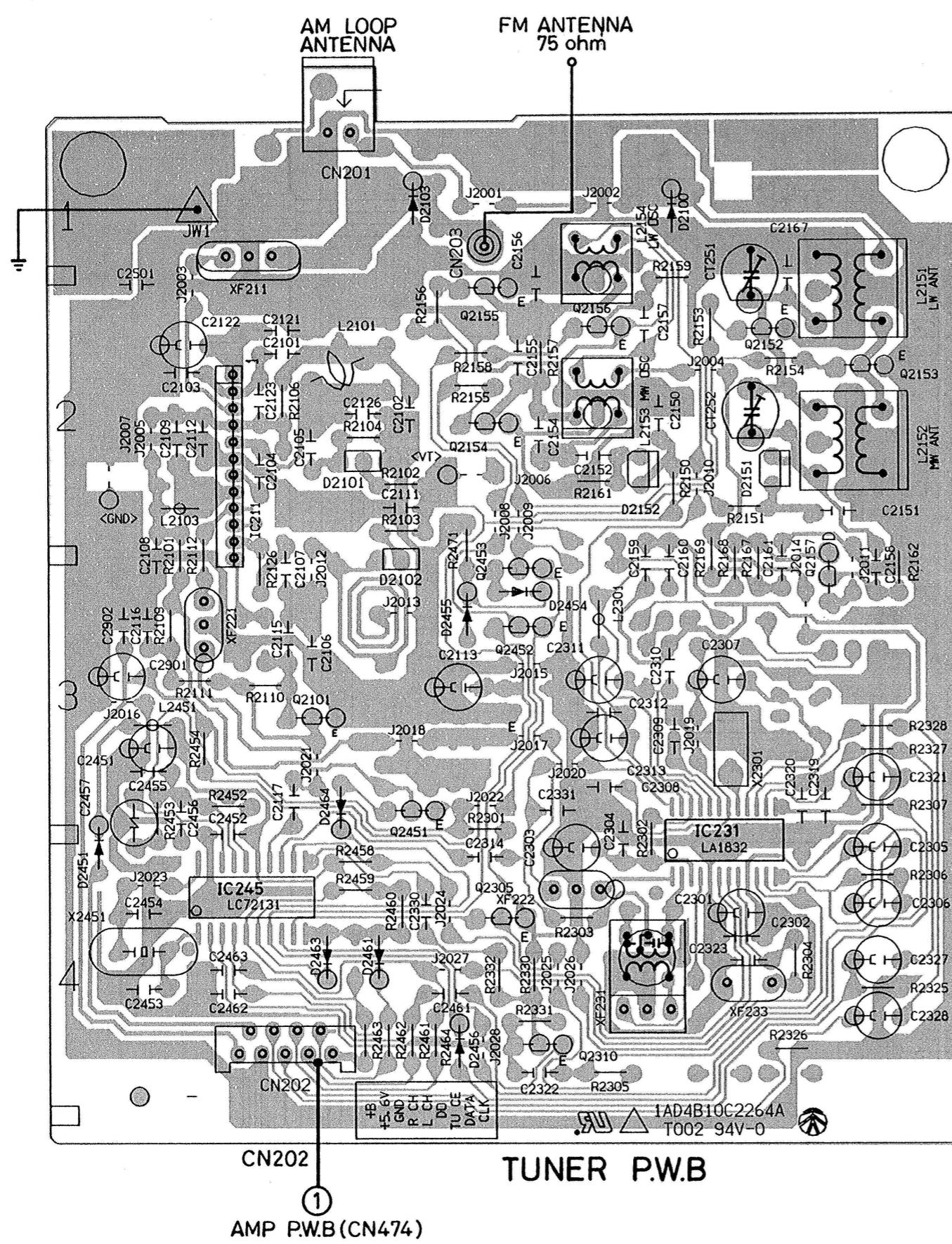
| BASE MECHANISM P.W.BOARD ASSY | | |
|-------------------------------|--------------|---------------------------------|
| Ref. No. | Part No. | Description |
| 721 | 614 254 0664 | ASSY, PWB, MOTOR & LIMIT SWITCH |
| CN001 | 645 006 0939 | PLUG, 6P |
| S001 | 645 012 5836 | SWITCH, LEAF, LIMIT SWITCH |
| or | 645 019 2661 | SWITCH, LEAF, LIMIT SWITCH |

| CD SENSOR P.W.BOARD ASSY | | |
|--------------------------|--------------|----------------------|
| Ref. No. | Part No. | Description |
| 651 | 614 270 1928 | ASSY, PWB, SENSOR |
| D191 | 407 177 6109 | PHOTO COUPLE GP1A53E |

SCHEMATIC DIAGRAM (TUNER)—

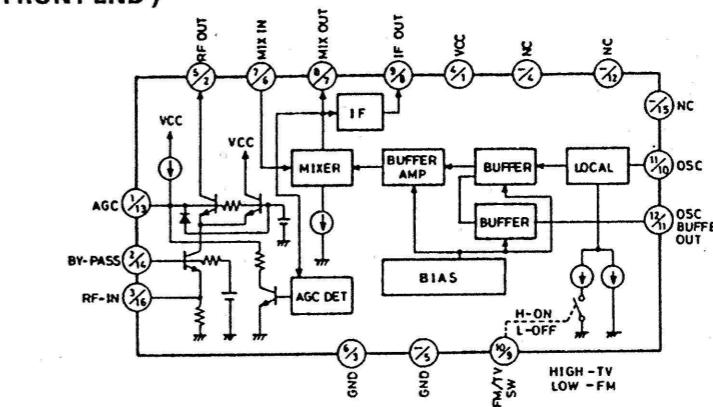


WIRING DIAGRAM (TUNER)

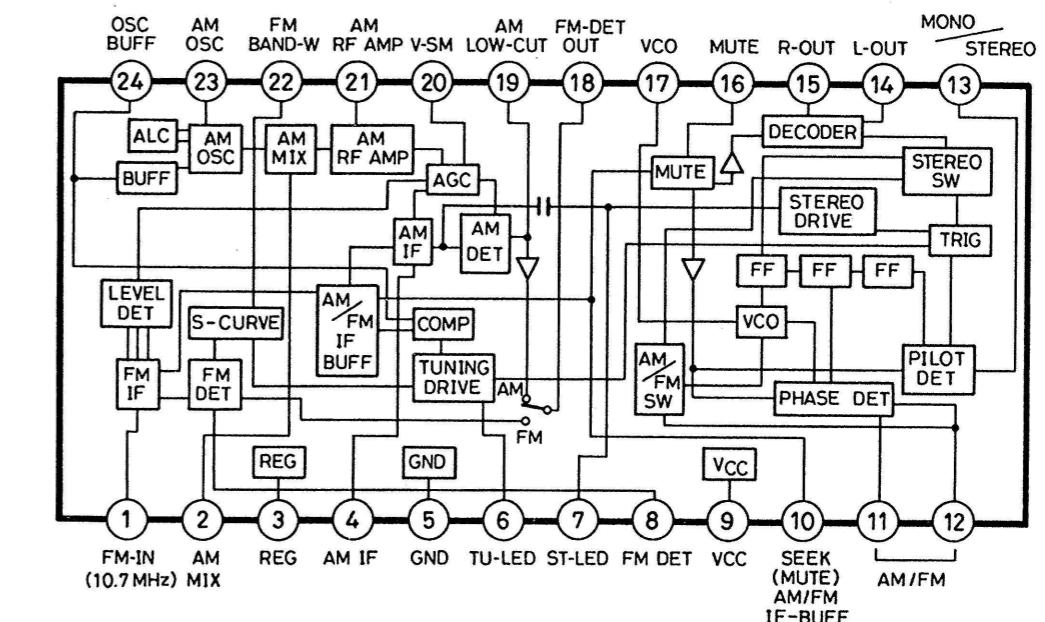


IC BLOCK DIAGRAM

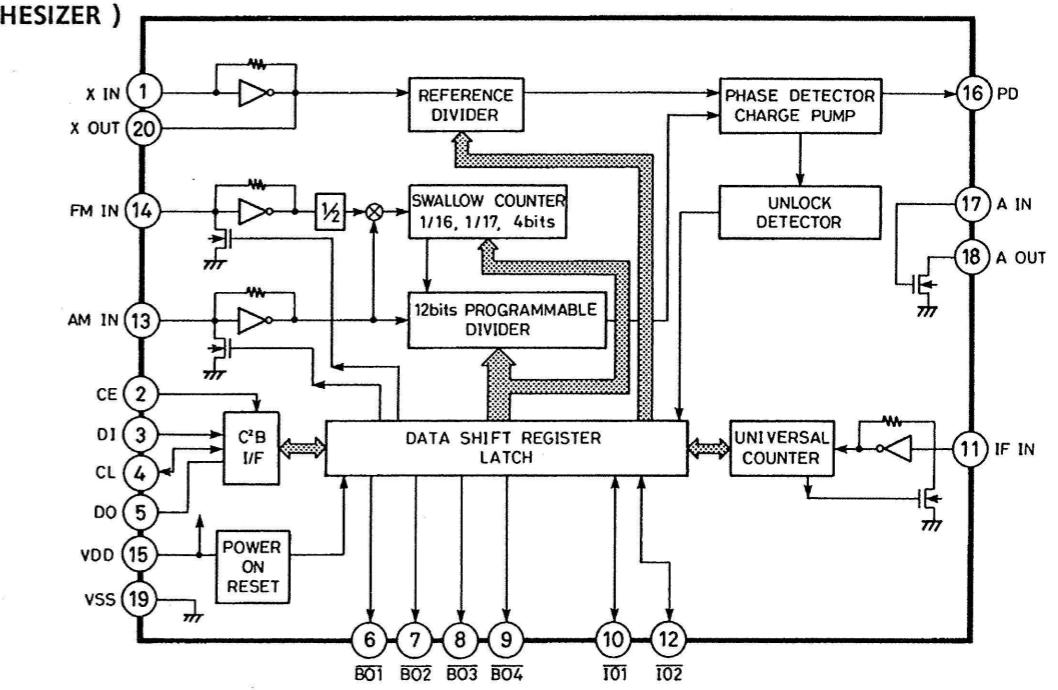
IC211 TA8176S (FM FRONT END



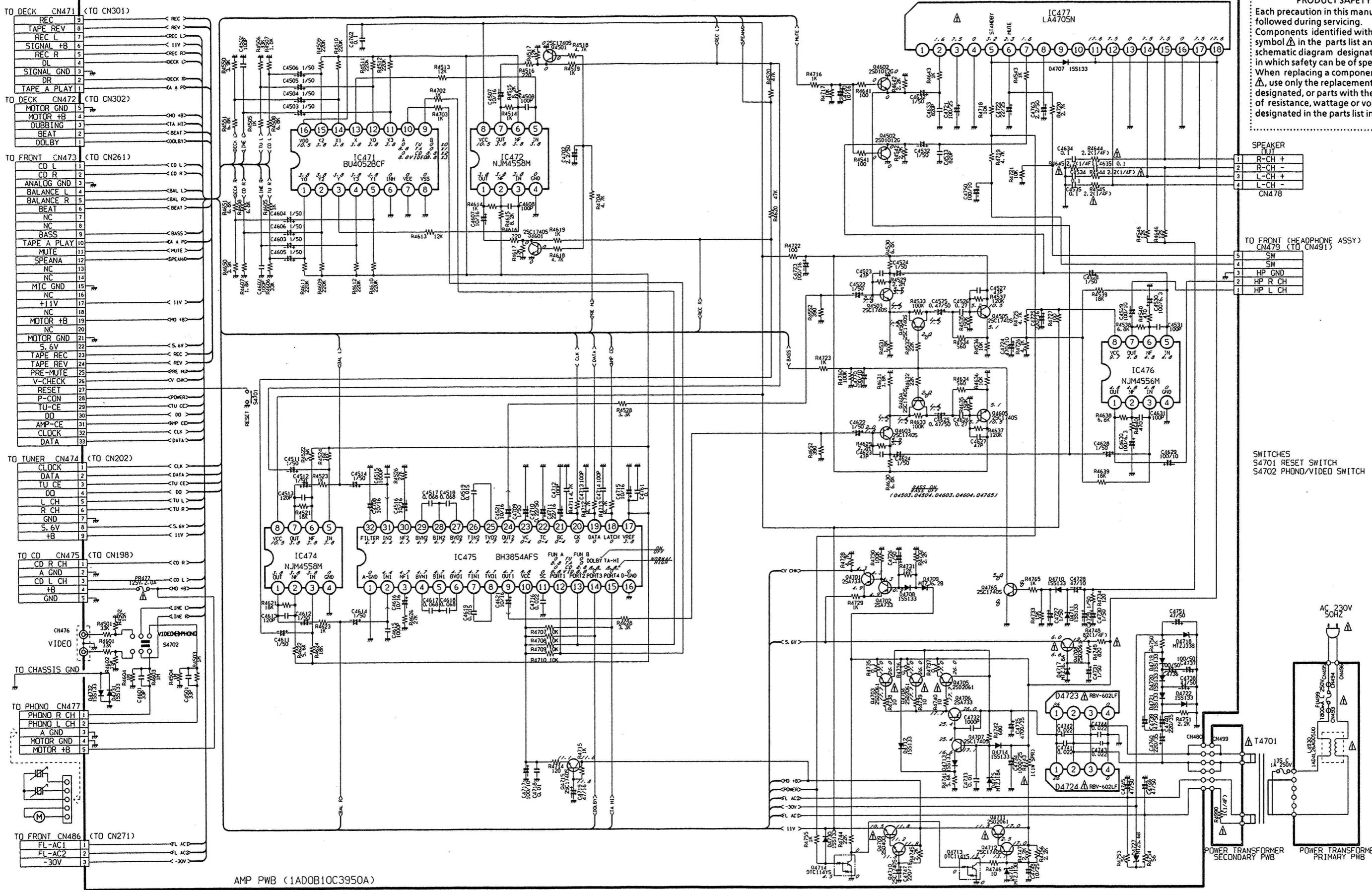
IC231 LA1832 (AM/FM IF & FM MPX



IC245 LC72131M
(PLL SYNTHESIZER)



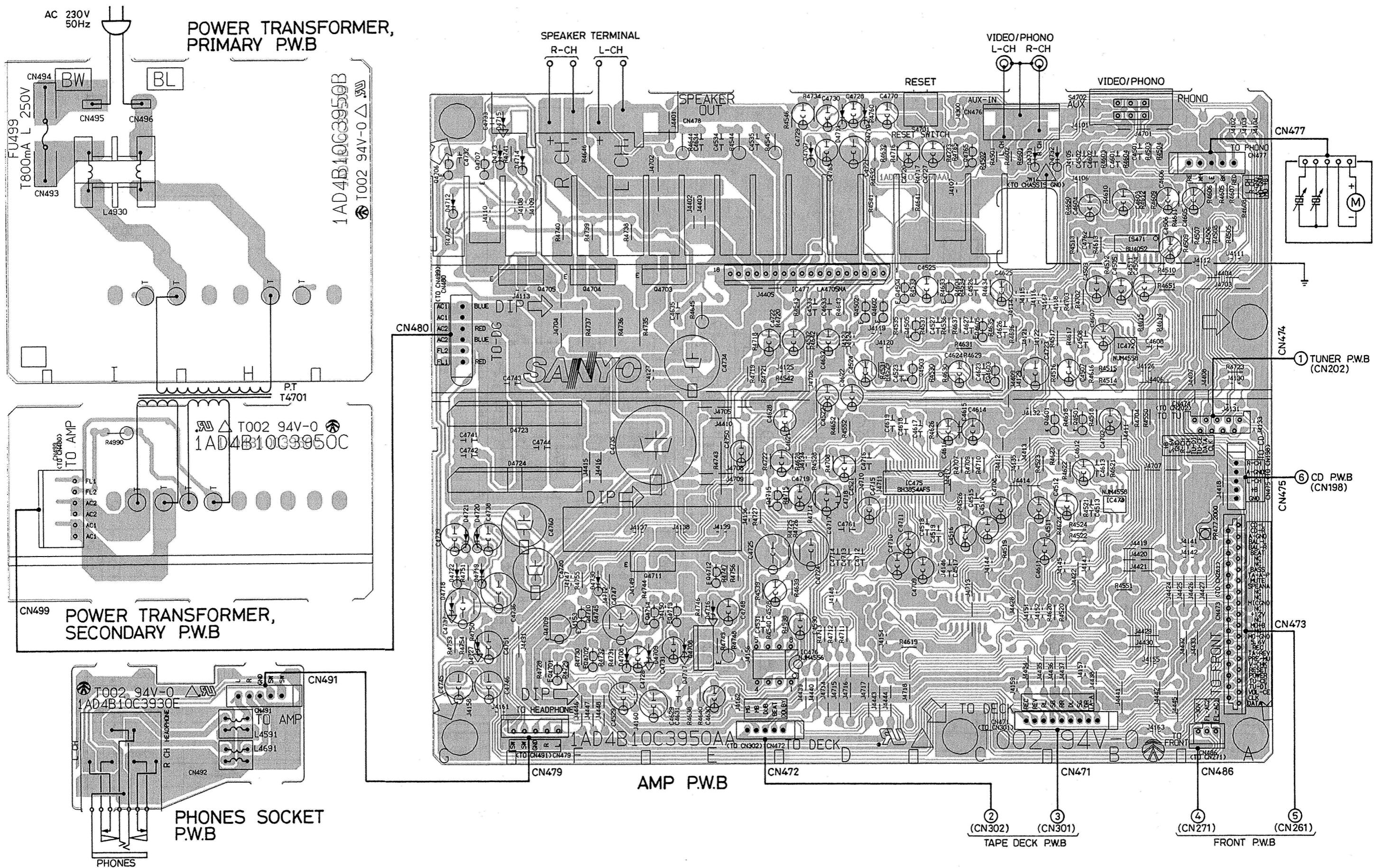
SCHEMATIC DIAGRAM (AMP.)



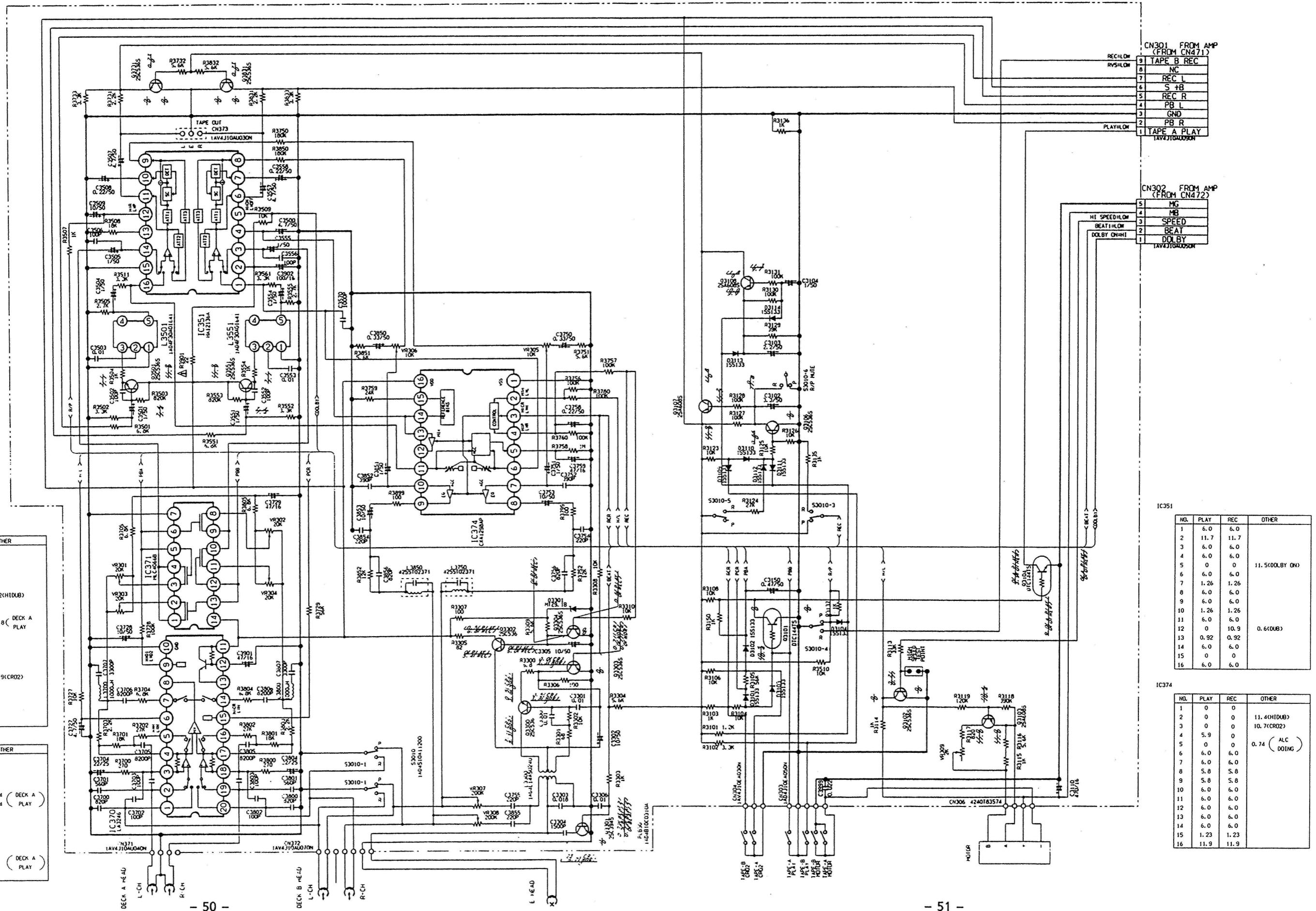
PRODUCT SAFETY NOTICE
Each precaution in this manual should be followed during servicing.
Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

SPEAKER OUT

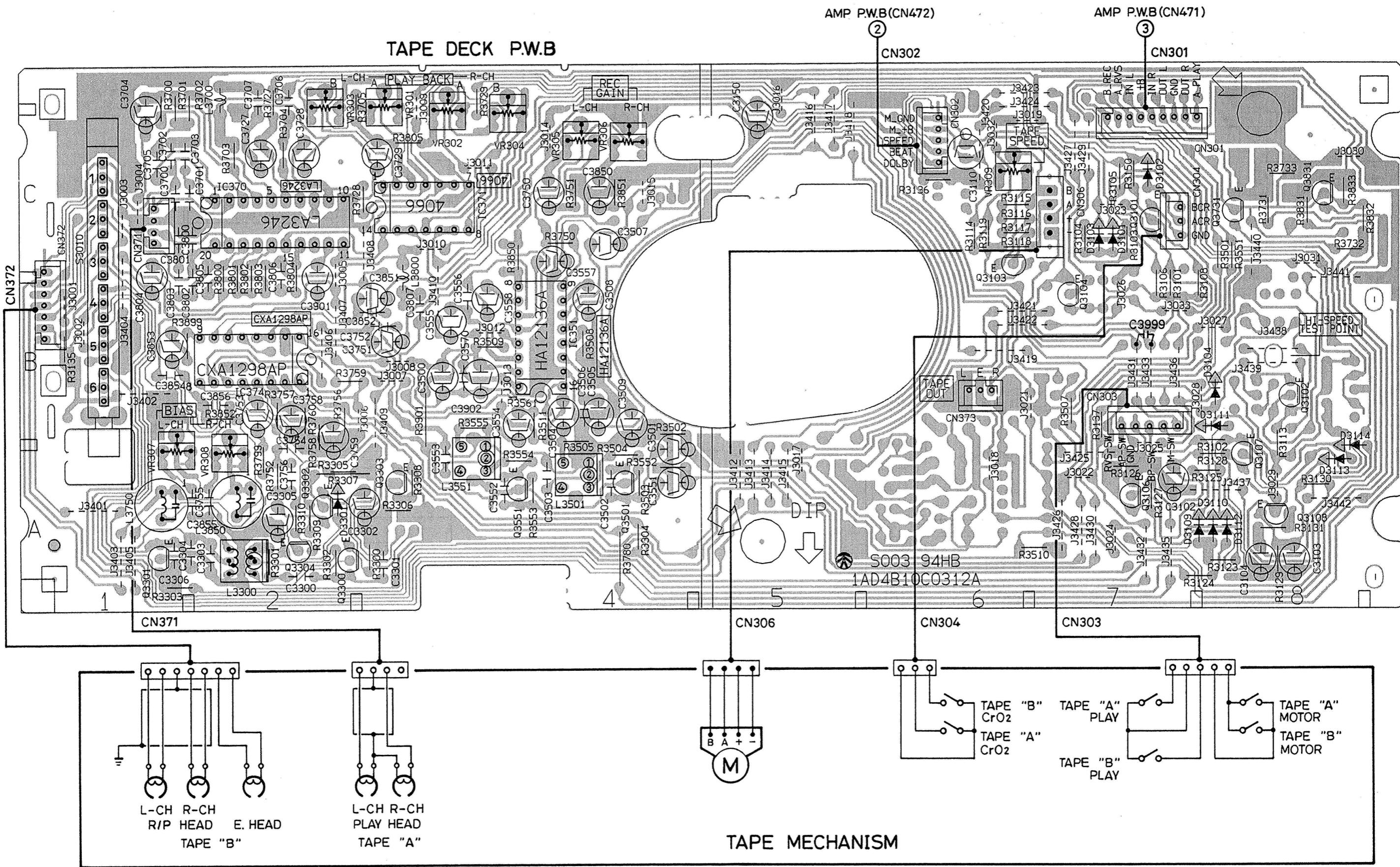
WIRING DIAGRAM (AMP.) -



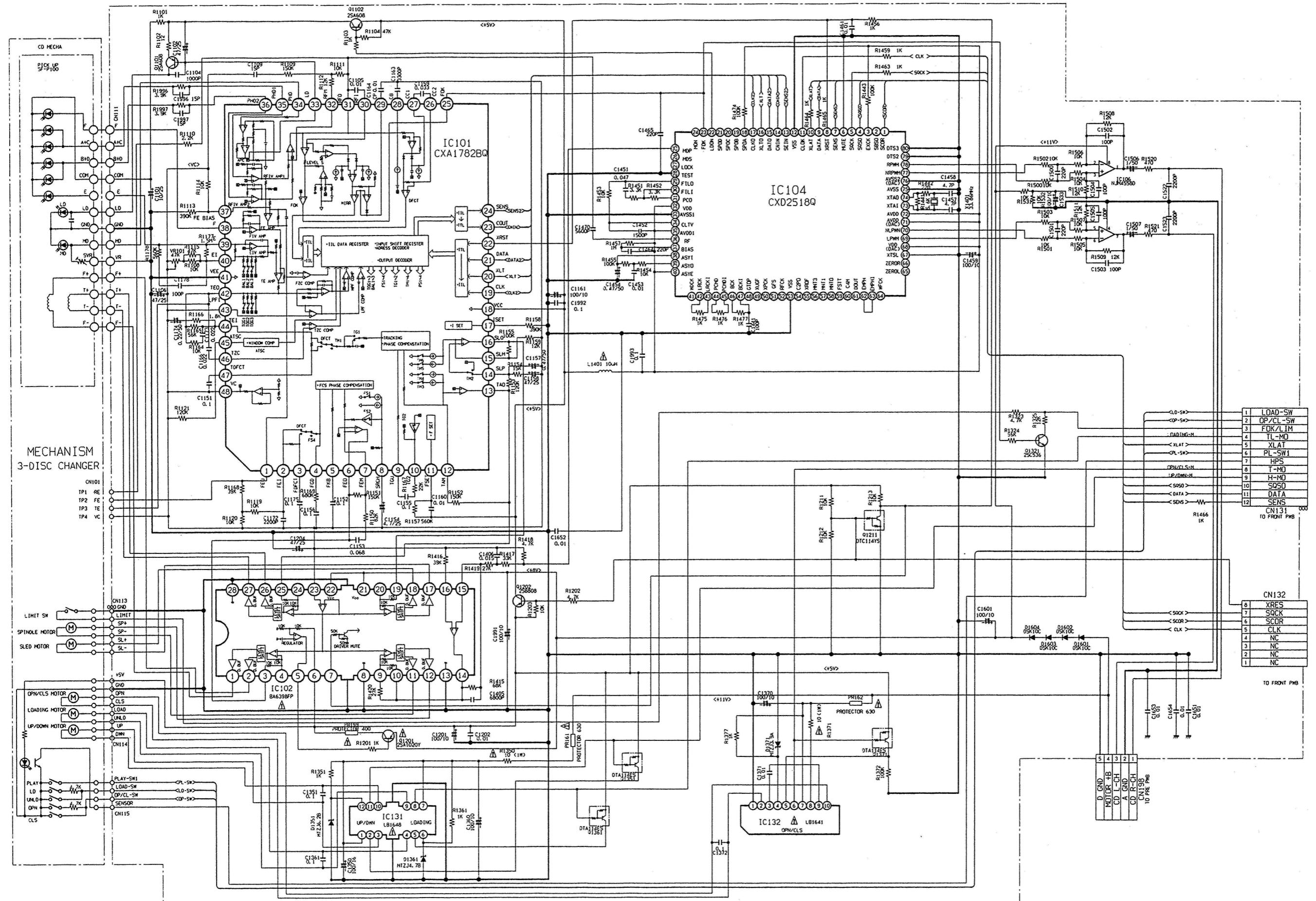
SCHEMATIC DIAGRAM (TAPE DECK)



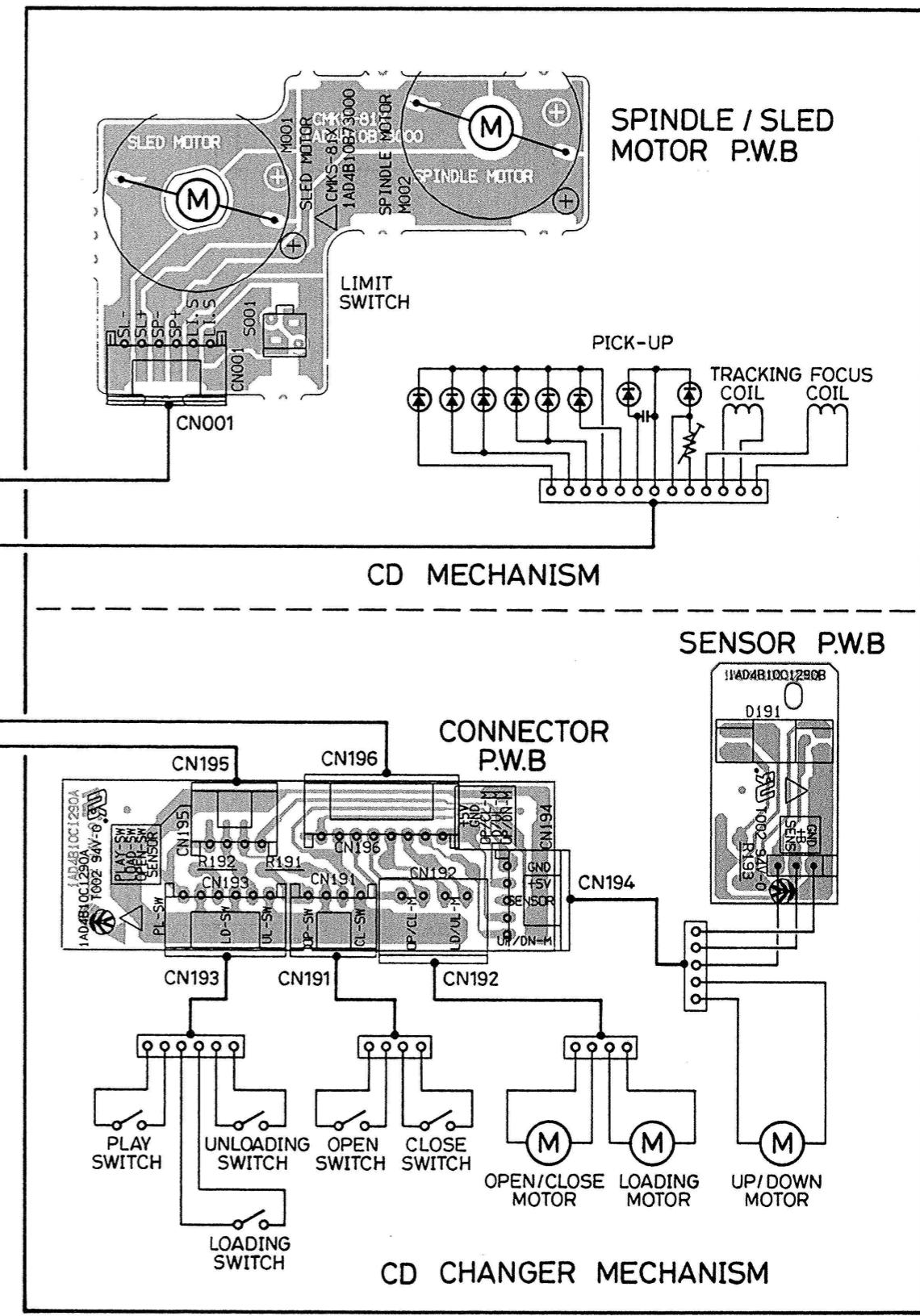
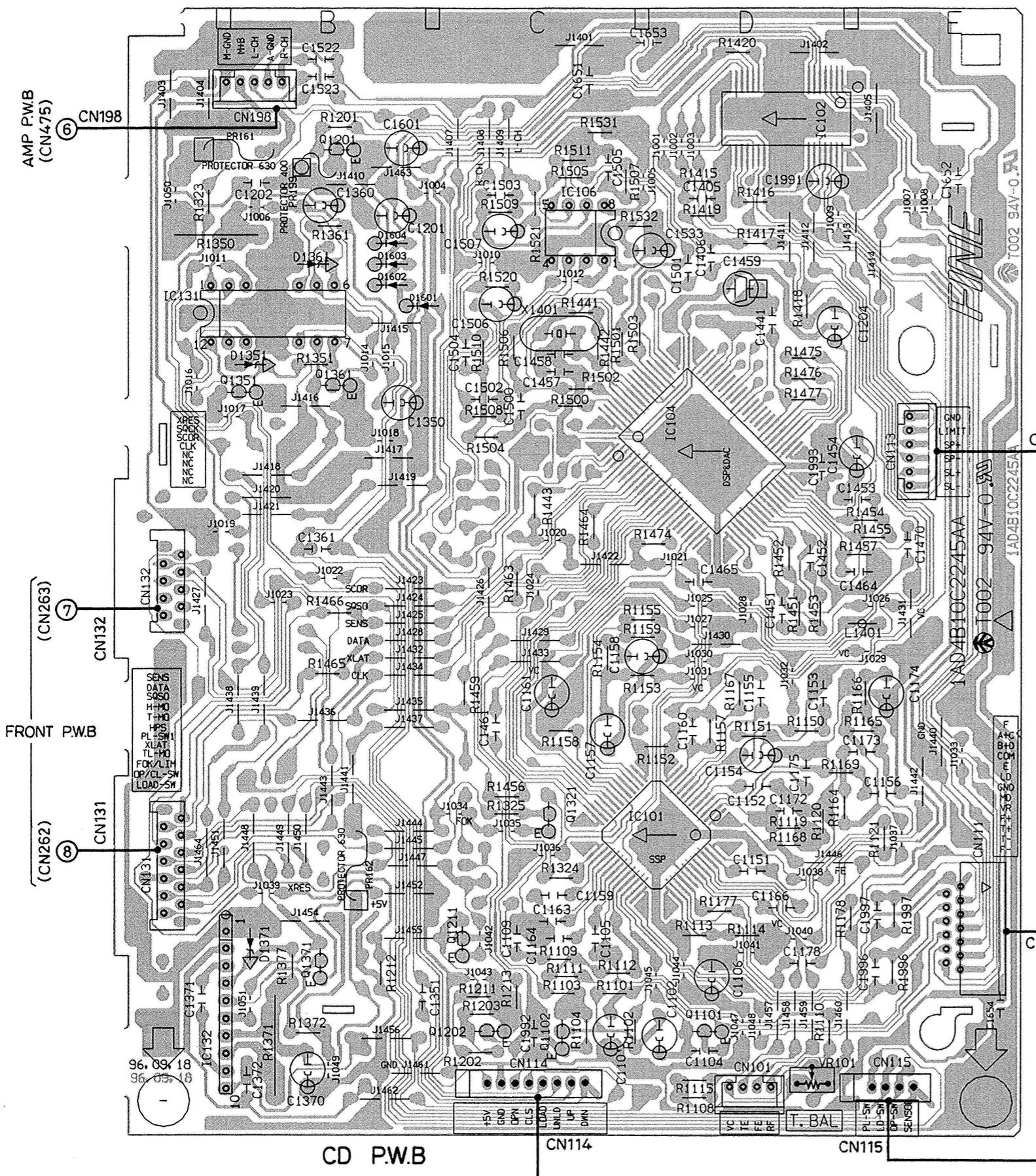
WIRING DIAGRAM (TAPE DECK)



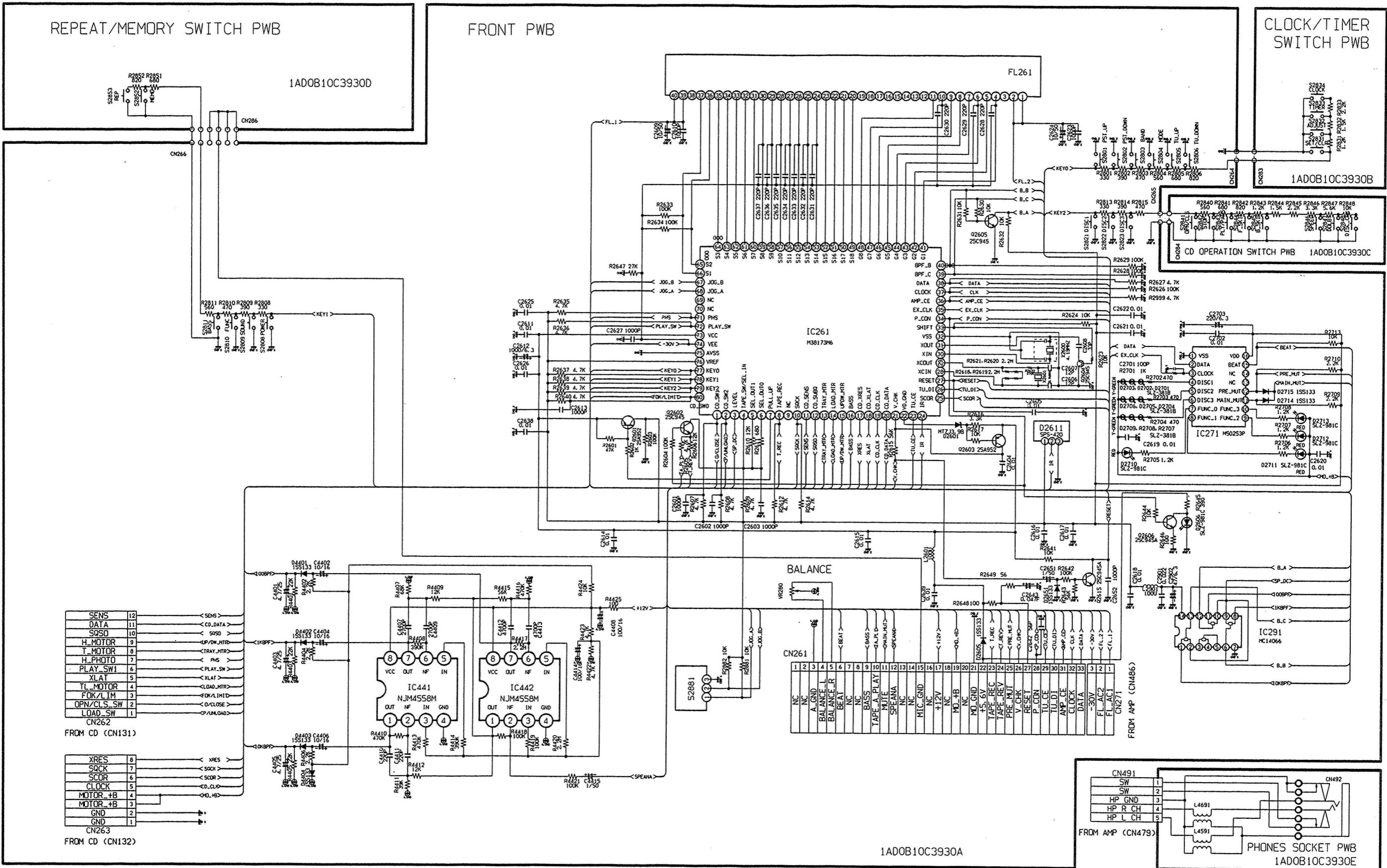
SCHEMATIC DIAGRAM (CD)-



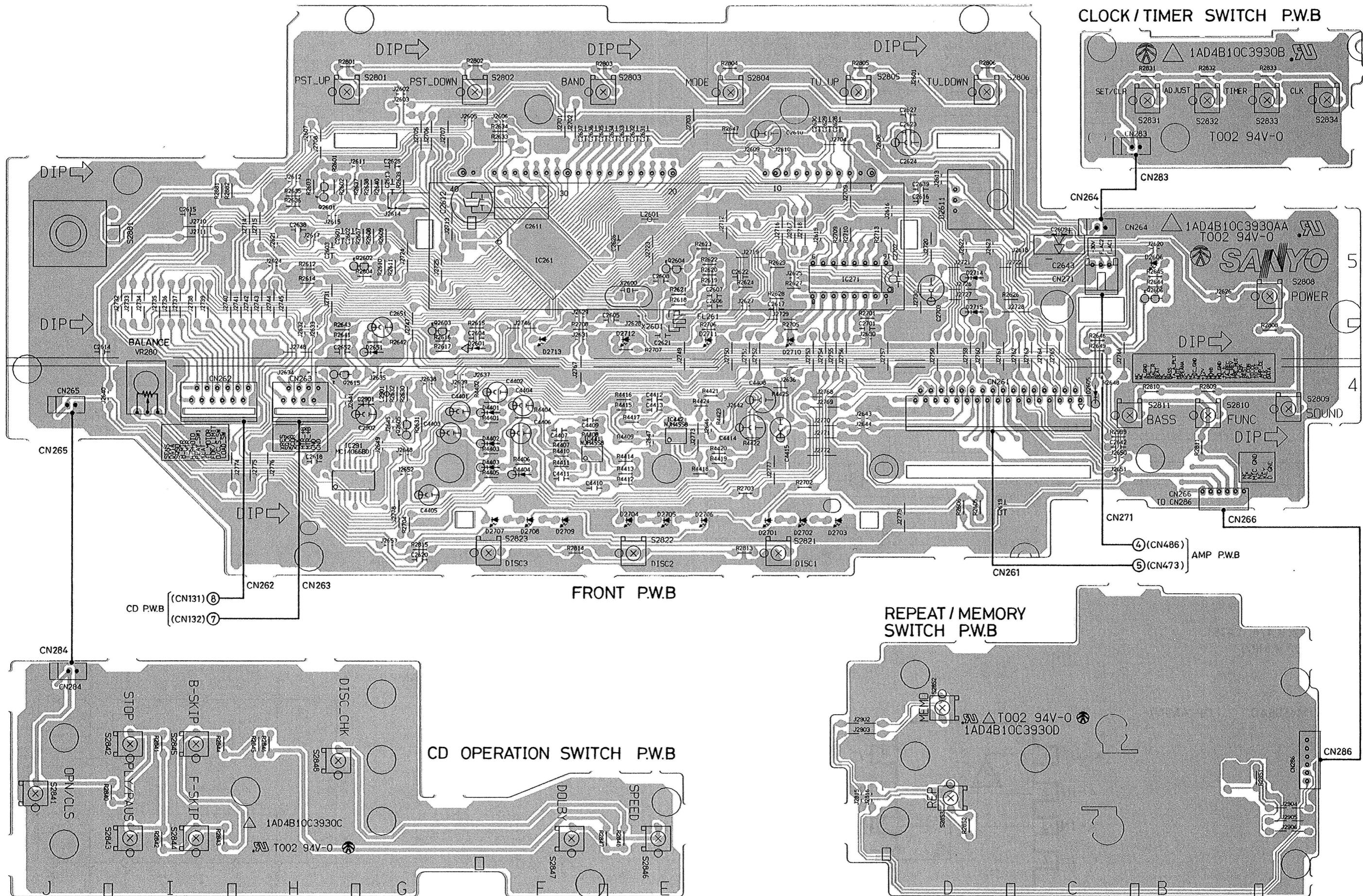
WIRING DIAGRAM (CD)



SCHEMATIC DIAGRAM (FRONT OPERATION)

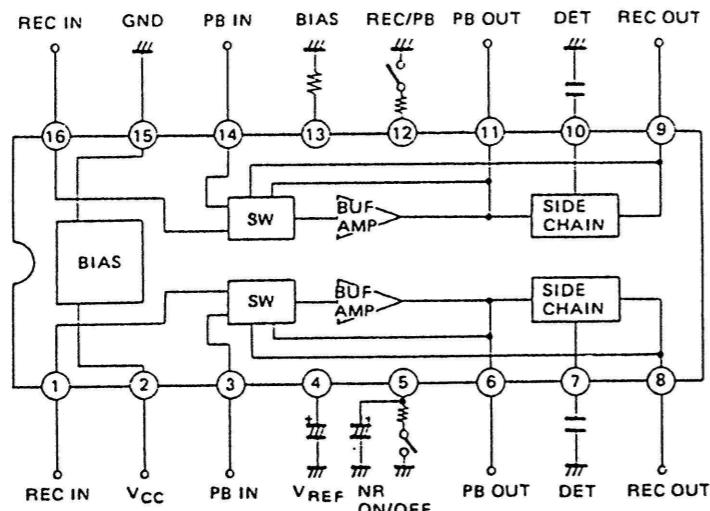


WIRING DIAGRAM (FRONT OPERATION)



IC BLOCK DIAGRAM

IC351 HA12136A (DOLBY B-TYPE NOISE REDUCTION)

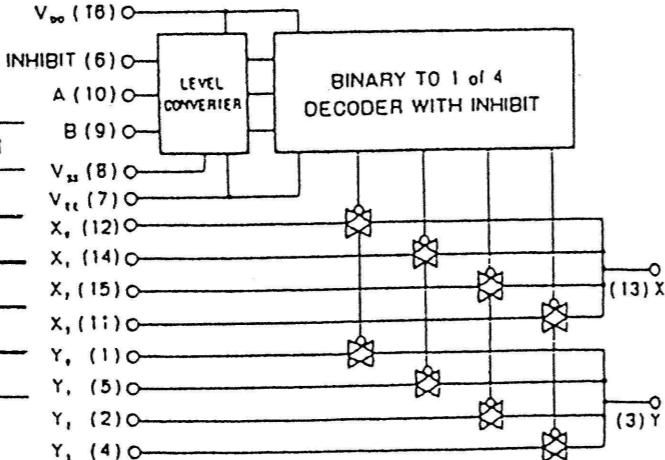


IC471 BU4052BCF (FUNCTION)

Truth Table

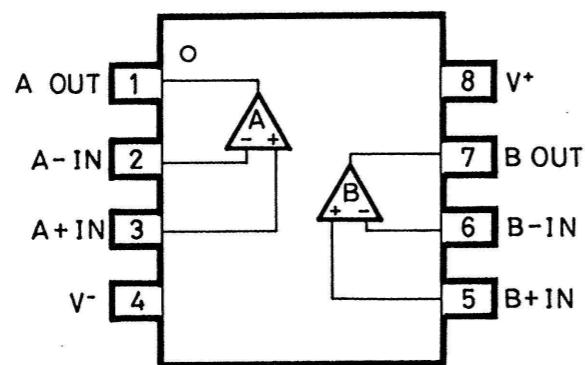
| INHIBIT | A | B | ON SWITCH |
|---------|---|---|-----------|
| L | L | L | X0 Y0 |
| L | H | L | X1 Y1 |
| L | L | H | X2 Y2 |
| L | H | H | X3 Y3 |
| H | X | X | NONE |

X : Don't Care



IC441, IC442, IC472, IC474, IC475
NJM4558M (OP. AMP.)

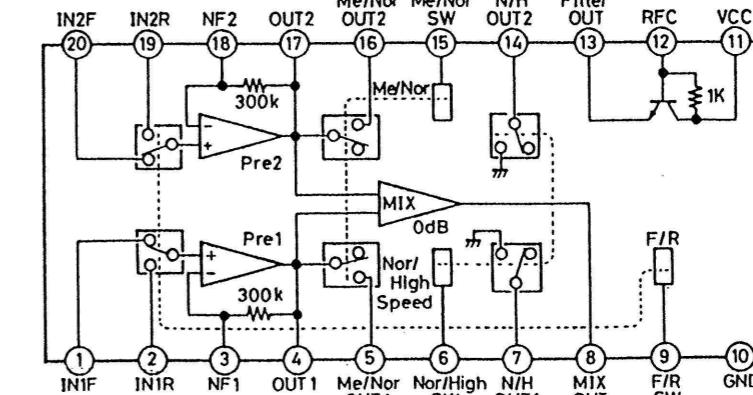
IC476
NJM4556D or NJM4556AD (OP. AMP.)



IC BLOCK DIAGRAM

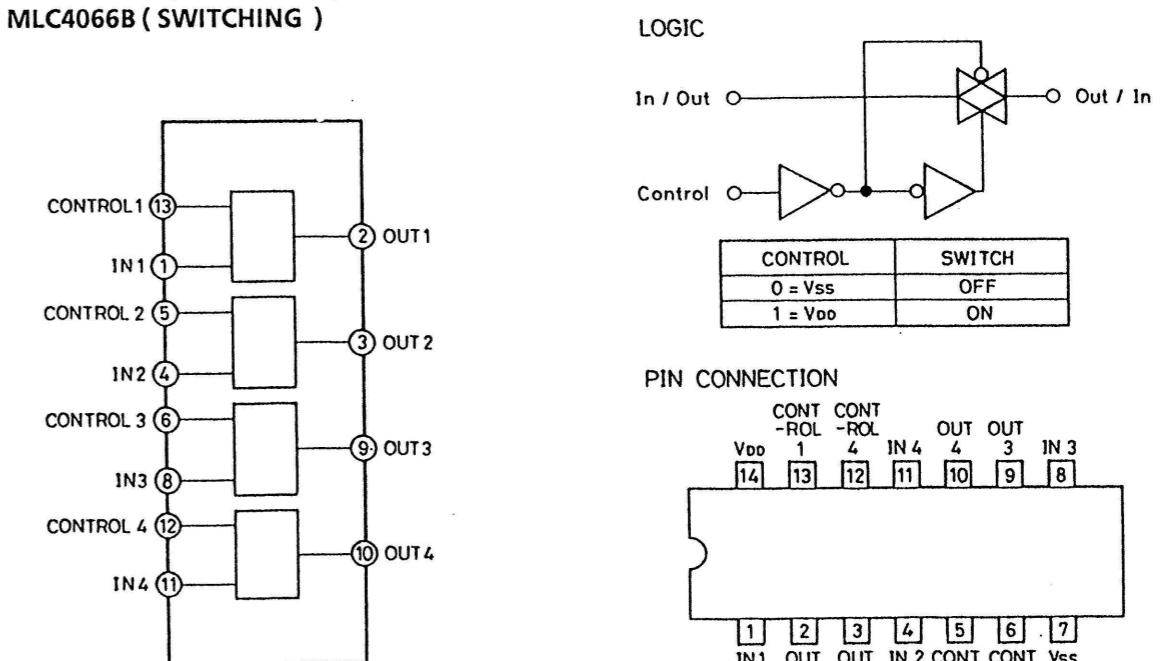
TAPE DECK SECTION

IC370 LA3246 (PRE-AMP./MIXING AMP./SWITCHING)

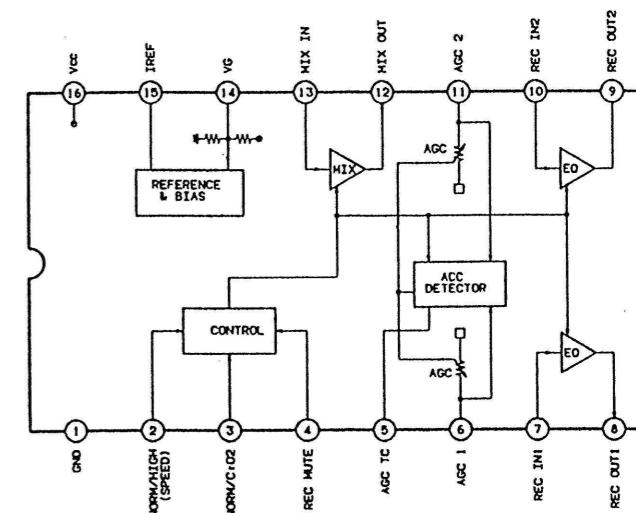


IC291 MC14066B (SWITCHING)

IC371 MLC4066B (SWITCHING)

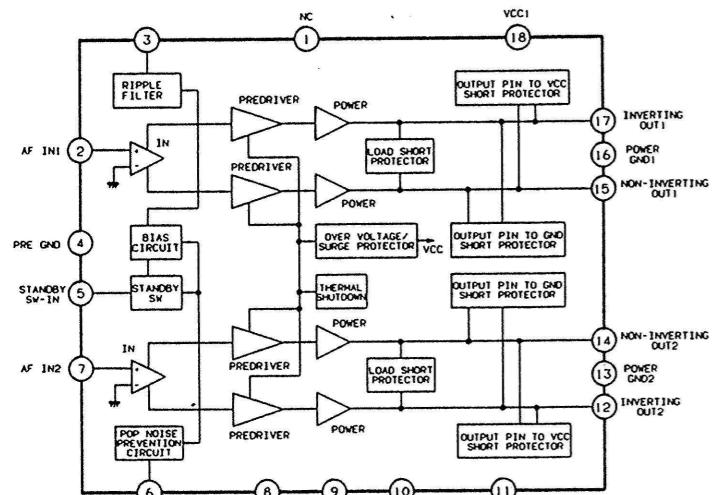


IC374 CXA1298AP (EQUALIZER AMP.)



IC BLOCK DIAGRAM & DESCRIPTION

IC477 LA4705NA (POWER AMP.)

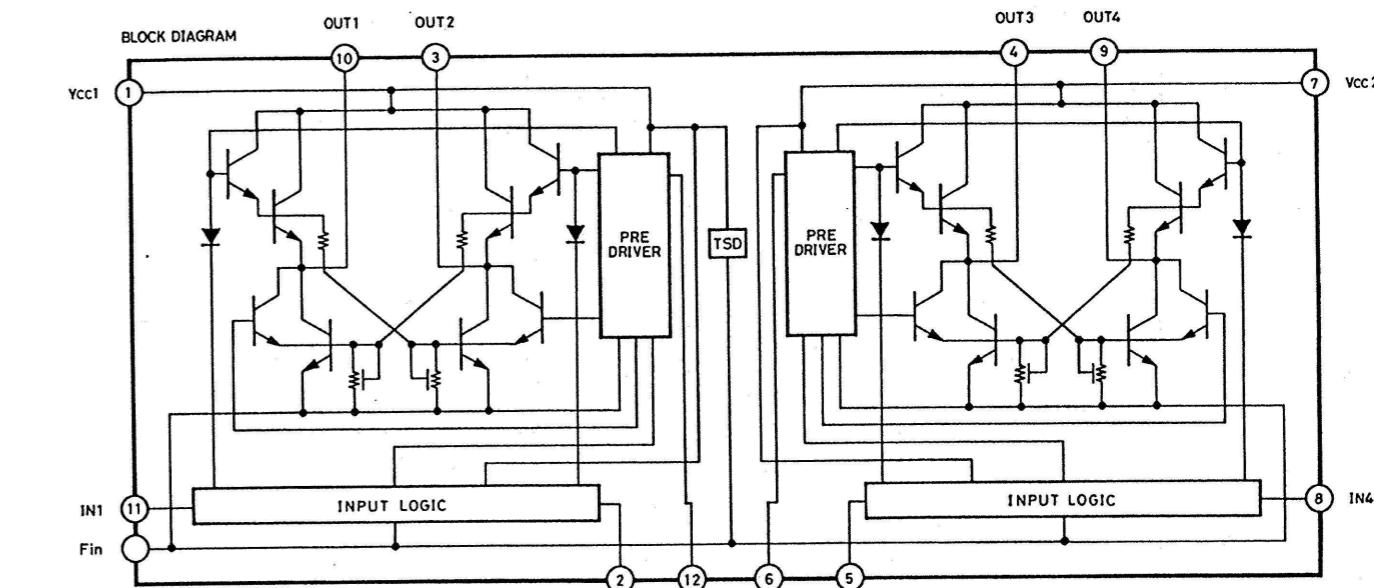


IC101 CXA1782BQ (SERVO SIGNAL PROCESSOR)

| No. | Name | I / O | Description |
|-----|-----------------|-------|---|
| 1 | FEO | O | Focus error amplifier output. |
| 2 | FEI | I | Focus error input. |
| 3 | FDFCT | I | Capacitor connection pin for detect time constant. |
| 4 | FGD | I | Ground this pin through a capacitor when decreasing the focus servo high-frequency |
| 5 | FLB | I | External time constant setting pin for increasing the focus servo low frequency. |
| 6 | FEO | O | Focus drive output. |
| 7 | FEM | I | Focus amplifier negative input. |
| 8 | SRCH | I | External time constant setting pin for generating focus servo waveform. |
| 9 | TGU | I | External time constant setting pin for switching tracking high-frequency gain. |
| 10 | TG2 | I | |
| 11 | FSET | I | High cut off frequency setting pin for focus and tracking phase compensation amplifier. |
| 12 | TAM | I | Tracking amplifier negative input. |
| 13 | TAO | O | Tracking drive output. |
| 14 | SLP | I | Sled amplifier non-inverted input. |
| 15 | SLM | I | Sled amplifier negative input. |
| 16 | SLO | O | Sled drive output |
| 17 | ISET | I | Setting pin for Focus search, Tracking jump, and Sled kick current. |
| 18 | V _{CC} | - | +5.0V |
| 19 | CLK | I | Serial data transfer clock input from CPU. |
| 20 | XLT | I | Latch input from CPU. |
| 21 | DATA | I | Serial data input from CPU. |
| 22 | XRST | I | Reset input; resets at Low. |
| 23 | C.OUT | O | Track number count signal output. |
| 24 | SENS | O | Outputs FZC, DFCT, TZC, gain, balance, and others according to the command from CPU. |

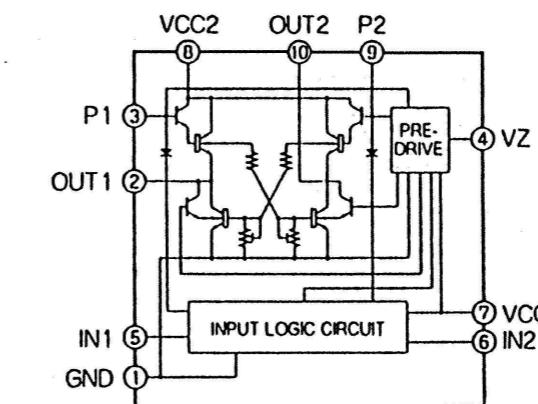
IC BLOCK DIAGRAM & DESCRIPTION

IC131 LB1648 (REEL MOTOR DRIVER)



| IN1 | IN2 | OUT1 | OUT2 | IN3 | IN4 | OUT3 | OUT4 |
|-----|-----|------|------|-----|-----|------|------|
| 0 | 0 | OPEN | OPEN | 0 | 0 | OPEN | OPEN |
| 1 | 0 | H | L | 1 | 0 | H | L |
| 0 | 1 | L | H | 0 | 1 | L | H |
| 1 | 1 | L | L | 1 | 1 | L | L |

IC132 LB1641 (RECORD/PLAY SWITCHING)



| Input | Output | Action |
|-------|--------|-----------|
| IN1 | IN2 | OUT1 OUT2 |
| 0 | 0 | 0 0 |
| 1 | 0 | 1 0 |
| 0 | 1 | 0 1 |
| 1 | 1 | 0 0 |

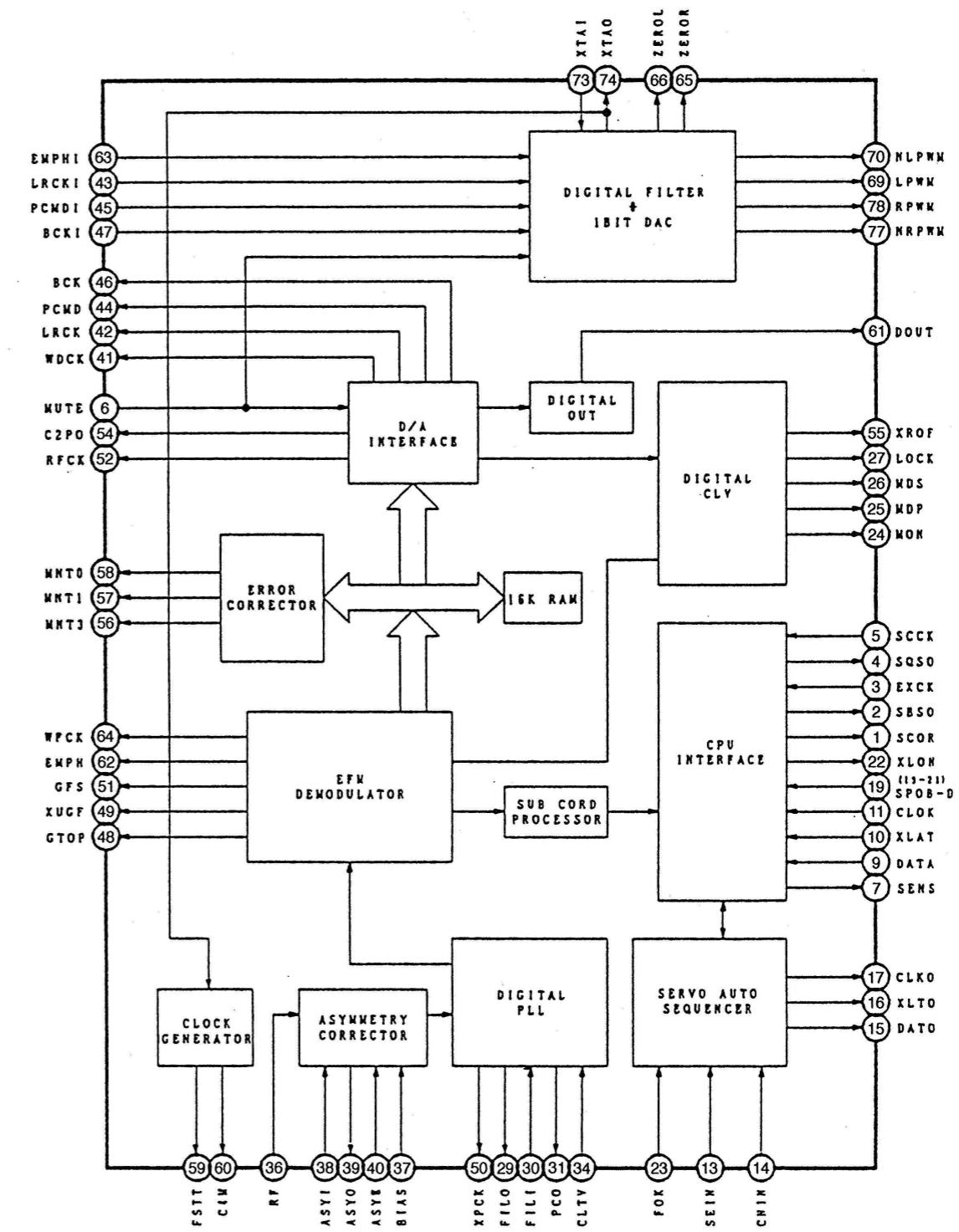
IC BLOCK DIAGRAM & DESCRIPTION

IC104 CXD2518Q (DIGITAL SIGNAL PROCESSOR)

| No. | Name | I/O | Description |
|-----|-------------------|-----|---|
| 1 | SCOR | O | Turns "H" when sync S0 or S1 is detected. |
| 2 | SBSO | O | Serial output of sub-code P ~ W. |
| 3 | EXCK | I | Clock input for reading SBSO. |
| 4 | SQSO | O | Serial output of SUBQ & SOBIT. |
| 5 | SQCK | I | Clock input for reading SQSO. |
| 6 | MUTE | I | "H" at muting, "L" at muting cancel. |
| 7 | SENS | O | SENS signal output to CPU. |
| 8 | XRST | I | System reset, "L" at resetting. |
| 9 | DATA | I | Inputs serial data from CPU. |
| 10 | XLAT | I | Latches input from CPU. Serial data latches at falling edge. |
| 11 | CLOK | I | Inputs serial data transfer clock from CPU. |
| 12 | V _{ss} | - | GND. |
| 13 | SEIN | I | Inputs SENS signal from SSP. |
| 14 | CNIN | I | Inputs track jump count signal |
| 15 | DATO | O | Outputs serial data to SSP |
| 16 | XLTO | O | Outputs latches to SSP. Serial data latches at falling edge. |
| 17 | CLKO | O | Outputs serial data transfer clock to SSP. |
| 18 | TEST2 | I | Pin for TEST. Normal used state: V _{DD} . |
| 19 | SPOB | I | Not used |
| 20 | SPOC | I | Not used |
| 21 | SPOD | I | Not used |
| 22 | XLON | O | Interface for extension of M. processor(output) |
| 23 | FOK | I | Focus OK signal input pin. Used servo auto sequencer with SENS output. |
| 24 | MON | O | ON/OFF control signal for spindle motor. |
| 25 | MDP | O | Servo control signal for spindle motor. |
| 26 | MDS | O | Not used |
| 27 | LOCK | O | Not used |
| 28 | TEST | I | GND. |
| 29 | FILO | O | Output of filter for master PLL.(Slave = Digital PLL) |
| 30 | FILI | I | Inputs to filter for master PLL. |
| 31 | PCO | O | Outputs of charge pump for master PLL. |
| 32 | V _{DD} | - | Power supply for digital.(+ 5V) |
| 33 | AV _{SS1} | - | Power supply for analog.(0V) |
| 34 | CLTV | I | VCO control voltage input for master PLL. |
| 35 | AV _{DD1} | - | Power supply for analog.(+ 5V) |
| 36 | RF | I | EFM signal input. |
| 37 | BIAS | I | Inputs constant current for asymmetry correction circuit. |
| 38 | ASYI | I | Inputs comparator voltage for asymmetry correction circuit. |
| 39 | ASYO | O | EFM fill swing output."L" = V _{ss} , "H" = V _{DD} |
| 40 | ASYE | I | "L" : OFF of asymmetry correction. "H" : ON of asymmetry correction. |

IC BLOCK DIAGRAM & DESCRIPTION

IC104 CXD2518Q (DIGITAL SIGNAL PROCESSOR)

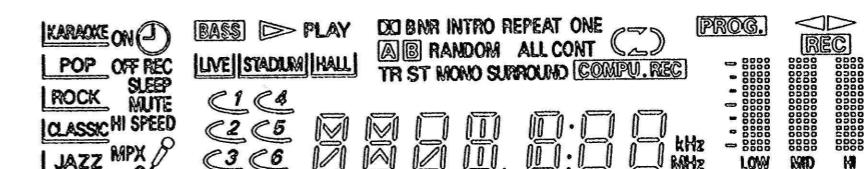
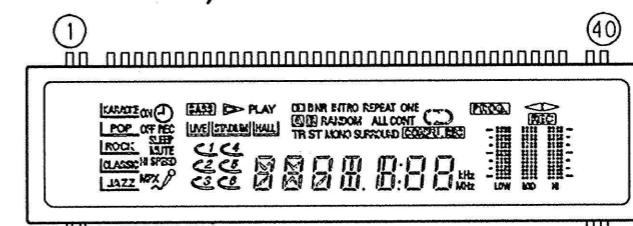


IC BLOCK DIAGRAM & DESCRIPTION

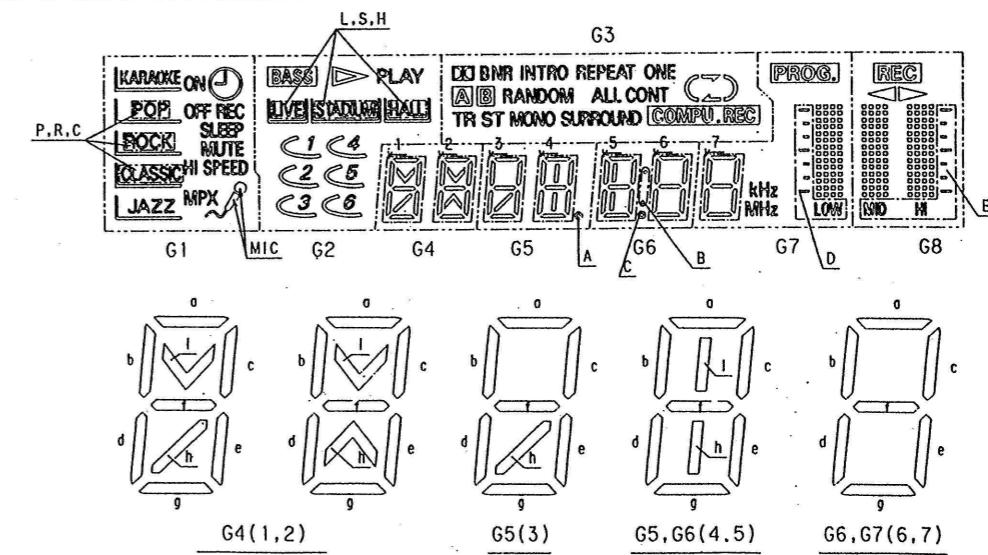
IC261 M38174M8-283FP (MICROPROCESSOR)

| No. | NAME | I/O | DESCRIPTION |
|-----|----------|-----|--|
| 1 | CD SW1 | I | CLOSE SWITCH, OPEN SWITCH INPUT |
| 2 | CD SW2 | I | UN-LOAD, PLAY |
| 3 | LEVEL | I | SPECTRUM ANALYZER SIGNAL |
| 4 | TAPE SW | I | TAPE A, REVERSE , SEL IN SELECT |
| 5 | SELOUT1 | O | SELECT |
| 6 | SELOUT0 | O | SELECT |
| 7 | PULL UP | O | PULL-UP POWER (ON = L) |
| 8 | TAPE REC | I | TAPE B, REC SWITCH (REC = L) |
| 9 | DOOR SW | I | CD TRAY, DOOR SWITCH (DOOR OPEN = L) |
| 10 | CD SQCK | O | CD DSP SQCK |
| 11 | CD SENS | I | CD DSP SENS |
| 12 | CD SUBQ | I | CD DSP SUBQ |
| 13 | TRAY MTR | O | TRAY OPEN/CLOSE MOTOR CONTROL (OPEN = H, CLOSE = L) |
| 14 | LOAD MTR | O | TRAY LOADING MOTOR CONTROL (LOAD = H, UNLOAD = L) |
| 15 | UPDW MTR | O | UP/DOWN MOTOR CONTROL (UP = H, DOWN = L) |
| 16 | BASS | O | BASS CONTROL (ON = L) |
| 17 | CD XRES | O | CD POWER (CD POWER OFF = H, RESET = M, POWER ON = L) |
| 18 | CD XLAT | O | CD DSP XLAT |
| 19 | CD CLOCK | O | CD DSP CLOCK |
| 20 | CD DATA | O | CD DSP DATA |
| 21 | V CHK | I | VOLTAGE CHECK, FAILURE |
| 22 | VD GND | O | GROUND |
| 23 | TU CE | O | TUNER CE |
| 24 | IR | I | REMOTE CONTROL |
| 25 | SCOR | I | CD SCOR DETECTION |
| 26 | TU D1 | I | TUNER DATA |
| 27 | RESET | | SYSTEM RESET |
| 28 | XCIN | | SUB CLOCK OSCILLATOR |
| 29 | XOUT | | SUB CLOCK OSCILLATOR |
| 30 | XIN | | MAIN CLOCK OSCILLATOR |
| 31 | XOUT | | MAIN CLOCKOSCILLATOR |
| 32 | VSS | | GROUND |
| 33 | SHIFT | O | MAIN CLOCK SHIFT CONTROL (L = POS A, H = POS B) |
| 34 | P-CON | O | POWER CONTROL (POWER ON = H) |
| 35 | EX-CLK | O | IC CLOCK SIGNAL |
| 36 | AMP CE | O | IC CECONTROL SYGNAL |
| 37 | CLOCK | O | TUNER PLL, ELECTRONIC VOLUME CLOCK/CD SELECT |
| 38 | DATA | O | TUNER PLL, ELECTRONIC VOLUME IC DATA/REV |

FL DISPLAY (FLUORESCENT TUBE) DESCRIPTION



ANODE & GRID ASSIGNMENT



TYPE : CM1485C

ANODE & GRID ASSIGNMENT

| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 |
|-----|----------|---------|------------|----|-----|-----|------|-----|
| S1 | ① (TIME) | BASS | ② B NR | 1a | 3a | 5a | 7a | M1 |
| S2 | OFF | HALL | A | 1b | 3b | 5b | 7b | M2 |
| S3 | SLEEP | LIVE | MONO | 1c | 3c | 5c | 7c | M3 |
| S4 | KARAOKE | 1 | CONT | 1d | 3d | 5d | 7d | M4 |
| S5 | JAZZ | 5 | ③ | 1e | 3e | 5e | 7e | M5 |
| S6 | ROCK | 2 | COMPU. REC | 1f | 3f | 5f | 7f | M6 |
| S7 | MPX | 4 | ONE | 1g | 3g | 5g | 7g | M7 |
| S8 | HI SPEED | 6 | ④ | 1h | 3h | 5h | L1 | H1 |
| S9 | MUTE | 3 | INTRO | 1i | (A) | 5i | L2 | H2 |
| S10 | ⑤ | PLAY | TR | 2a | 4a | 6a | L3 | H3 |
| S11 | ON | L.S.H | ST | 2b | 4b | 6b | L4 | H4 |
| S12 | REC | STADIUM | B | 2c | 4c | 6c | L5 | H5 |
| S13 | POP | 1 | ALL | 2d | 4d | 6d | L6 | H6 |
| S14 | MIC | 5 | ⑥ | 2e | 4e | 6e | L7 | H7 |
| S15 | P.R.C | 2 | SURROUND | 2f | 4f | 6f | (D) | (E) |
| S16 | JAZZ | 4 | ⑦ | 2g | 4g | 6g | PROG | ⑧ |
| S17 | CLASSIC | 6 | REPEAT | 2h | 4h | (B) | kHz | |
| S18 | KARAOKE | 3 | RANDOM | 2i | 4i | (C) | MHz | REC |

PIN ASSIGNMENT

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|
| Assignment | F1 | F1 | NP | G1 | G2 | G3 | G4 | G6 | G6 | G7 | G8 | NL | S18 | |

| Pin No. | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|
| Assignment | S17 | S16 | S15 | S14 | S13 | S12 | S11 | S10 | S9 | S8 | S7 | S6 | S5 | S4 | S3 | S2 | S1 | NP | F2 | F2 |

F1,F2:Filament G1-G8:Grid S1~S18:Anode NP:No Pin NL:No Lead

IC & TRANSISTOR VOLTAGES

• CD SECTION

IC101 CXA1782BQ

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | (V) |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PLAY | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.7 | 2.5 | 2.9 | 2.5 | 2.5 | 0.8 | 2.5 | 2.5 | 2.5 | 2.5 | |
| STOP | 2.6 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.9 | 2.5 | 2.5 | 0.8 | 2.5 | 2.5 | 2.5 | 2.5 | |
| Pin No. | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| PLAY | 2.5 | 1.2 | 5.0 | 5.0 | 5.0 | 4.9 | 4.8 | 0 | 5.0 | 5.0 | 0.6 | 0.7 | 1.5 | 2.4 | 2.5 | |
| STOP | 2.5 | 1.2 | 5.0 | 5.0 | 5.0 | 4.9 | 4.8 | 0 | 5.0 | 0 | 2.2 | 4.3 | 3.1 | 1.2 | 2.5 | |
| Pin No. | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | |
| PLAY | 3.5 | 2.5 | 3.8 | 0.2 | 2.5 | 2.5 | 2.4 | 2.3 | 2.5 | 2.2 | 0 | 2.5 | 2.5 | 2.5 | 2.5 | |
| STOP | 1.0 | 3.5 | 0.8 | 0 | 2.2 | 2.2 | 2.5 | 2.5 | 2.1 | 3.4 | 0 | 2.5 | 2.5 | 2.5 | 2.5 | |
| Pin No. | 46 | 47 | 48 | | | | | | | | | | | | | |
| PLAY | 2.5 | 2.5 | 2.5 | | | | | | | | | | | | | |
| STOP | 2.5 | 2.5 | 2.5 | | | | | | | | | | | | | |

IC102 BA6398FP

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|--|
| PLAY | 4.2 | 4.2 | 2.5 | 2.5 | 8.2 | 5.0 | 4.8 | 0 | 2.5 | 2.4 | 4.6 | 4.1 | 0 | 2.4 | 2.5 | |
| STOP | 4.2 | 0 | 2.5 | 2.5 | 9.3 | 5.0 | 4.8 | 0 | 2.5 | 2.5 | 4.6 | 4.6 | 0 | 9.0 | 2.5 | |
| Pin No. | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | | | |
| PLAY | 2.5 | 4.2 | 4.4 | 2.5 | 2.5 | 9.2 | 9.2 | 2.5 | 2.5 | 2.5 | 4.2 | 4.2 | 0 | | | |
| STOP | 2.5 | 4.6 | 4.6 | 2.5 | 2.5 | 9.2 | 9.2 | 2.5 | 2.5 | 0 | 4.6 | 4.6 | 0 | | | |

IC104 CXD2518

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| PLAY | 0 | 0 | 5.0 | 0 | 4.7 | 0 | 5.0 | 4.8 | 4.7 | 4.8 | 4.8 | 0 | 5.0 | 0 | 3.3 | |
| STOP | 0 | 3.4 | 5.0 | 0 | 4.9 | 0 | 0 | 4.8 | 4.8 | 4.8 | 4.8 | 0 | 5.0 | 0 | 5.0 | |
| Pin No. | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| PLAY | 5.0 | 5.0 | 5.0 | 0 | 0 | 0.5 | 5.0 | 5.0 | 2.6 | 0 | 5.0 | 0 | 2.5 | 2.5 | | |
| STOP | 5.0 | 5.0 | 5.0 | 0 | 0 | 0 | 5.0 | 0 | 0 | 2.5 | 0 | 0 | 2.5 | 2.5 | | |
| Pin No. | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | |
| PLAY | 2.5 | 5.0 | 0 | 2.5 | 5.0 | 2.7 | 0.8 | 2.5 | 2.5 | 5.0 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| STOP | 2.5 | 5.0 | 0 | 2.5 | 5.0 | 2.7 | 0.8 | 2.5 | 2.5 | 5.0 | 2.5 | 2.5 | 2.5 | 2.7 | 2.7 | |
| Pin No. | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | |
| PLAY | 2.0 | 2.4 | 0 | 5.0 | 1.7 | 5.0 | 2.5 | 1.7 | 0 | 5.0 | 4.5 | 0 | 0 | 2.6 | 1.7 | |
| STOP | 2.0 | 2.4 | 5.0 | 5.0 | 1.7 | 0 | 2.5 | 0 | 5.0 | 0 | 4.3 | 3.6 | 0 | 2.6 | 2.1 | |
| Pin No. | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | |
| PLAY | 1.7 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 2.5 | 2.5 | 5.0 | 2.5 | 2.5 | 2.5 | 0 | |
| STOP | 2.1 | 2.1 | 2.1 | 2.5 | 4.8 | 4.8 | 0 | 5.0 | 2.5 | 2.5 | 5.0 | 2.5 | 2.5 | 2.5 | 0 | |
| Pin No. | 76 | 77 | 78 | 79 | 80 | | | | | | | | | | | |
| PLAY | 0 | 2.5 | 2.5 | 0 | 0 | | | | | | | | | | | |
| STOP | 0 | 2.5 | 2.5 | 0 | 0 | | | | | | | | | | | |

IC131 LB1648

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| STOP | 8.8 | 4.3 | 0.4 | 0 | 4.3 | 3.8 | 8.8 | 1.9 | 0 | 0.4 | 1.9 | 6.1 | | | | |
| UP | 8.8 | 4.3 | 0 | 0 | 4.3 | 3.8 | 8.8 | 4.0 | 0 | 6.0 | 0 | 6.1 | | | | |
| DOWN | 8.8 | 0 | 6.0 | 0 | 4.3 | 3.8 | 8.8 | 0 | 0 | 0 | 4.0 | 6.1 | | | | |
| LOAD | 8.8 | 4.3 | 0.4 | 0 | 4.3 | 3.8 | 8.8 | 1.9 | 4.0 | 0.4 | 1.9 | 6.1 | | | | |
| UNLOAD | 8.8 | 4.3 | 0.4 | 4.0 | 0 | 3.8 | 8.8 | 1.9 | 0 | 0.4 | 1.9 | 6.1 | | | | |

IC132 LB1641

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | |
|---------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| STOP | 0 | 0.5 | 0.7 | 3.8 | 4.2 | 1.5 | 8.8 | 8.9 | 0.7 | 0.5 | | | | | | |
| OPEN | 0 | 0.2 | 0.7 | 3.8 | 0 | 4.0 | 8.8 | 8.9 | 5.2 | 4.0 | | | | | | |
| CLOSE | 0 | 4.0 | 4.9 | 3.8 | 4.2 | 0 | 8.8 | 8.9 | 0.7 | 0.7 | | | | | | |

IC & TRANSISTOR VOLTAGES

• FRONT SECTION

IC261 M38173M6

| Pin No. | 1 |
|---------|---|
|---------|---|